PUBLIC REVIEW DRAFT

ENVIRONMENTAL IMPACT REPORT

S. STAMOULES, INC. PISTACHIO PROCESSING FACILITY

FRESNO COUNTY, CALIFORNIA

LSA

November 2023

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ENVIRONMENTAL IMPACT REPORT

S. STAMOULES, INC. PISTACHIO PROCESSING FACILITY

FRESNO COUNTY, CALIFORNIA

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Project No. CFF2201

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
AB	Assembly Bill
ABM	Activity Based Model
ADA	Americans with Disabilities Act of 1990
AFY	acre-feet per year
AGR	Agricultural Supply
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
amsl	above mean sea level
APN	Assessor's Parcel Number
ASR	aquifer storage and recovery
Basin	San Joaquin Valley Groundwater Basin
Basin Plan	Water Quality Control Plan
BERD	Built Environment Resources Directory
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BRA	Biological Resources Assessment
Btu	British thermal units
C&D	Construction and Demolition
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CALGreen Code	California Green Building Standards Code
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code

CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
City	City of Fresno
CNEL	Community Noise Equivalent Level
Cortese List	Hazardous Waste and Substances Site List
County	County of Fresno
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CTR	California Toxics Rule
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DO	dissolved oxygen
DOC	California Department of Conservation
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EC	electrical conductivity
EIR	Environmental Impact Report
EMFAC2021	California Emission Factor Model
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FCFPD	Fresno County Fire Protection District
FCPWP	Fresno County Department of Public Works and Planning
FCRTA	Fresno County Rural Transit Agency
FCSD	Fresno County Sheriff's Department

FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
Fresno COG	Fresno County Association of Governments
FTA	Federal Transit Administration
FTA Manual	FTA Transit Noise and Vibration Impact Assessment Manual
GHG	greenhouse gas
gpm	gallons per minute
GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GWh	gigawatt-hours
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HMBP	Hazardous Materials Business Plan
HMTA	Hazardous Materials Transportation Act
HP	horsepower
HSC	Health and Safety Code
I-5	Interstate 5
ICBO	International Conference of Building Officials
IMP	Insulated Metal Panels
in/sec	inches per second
IND	Industrial Service Supply
LAA	land application area
LAMP	Local Agency Management Program
LBP	lead-based paints
L_{dn}	day-night average noise level
LED	light-emitting diode
LEPCs	local emergency planning committees
L_{eq}	equivalent continuous sound level
LESA	Land Evaluation and Site Assessment

L_{max}	maximum instantaneous noise level
LOS	level of service
LRA	Local Responsibility Area
LTS	less than significant impact
m/s^2	meters per second squared
MCL	maximum contaminant level
mg	milligrams
mg/kg	milligrams per kilogram
mL	milliliters
MLD	Most Likely Descendant
mm	millimeters
MMSCFD	million standard cubic feet per day
MOE	measure of effectiveness
mpg	miles per gallon
mph	miles per hour
MRZ	Mineral Resource Zone
MUN	Municipal and Domestic Supply
MW	megawatts
mya	million years ago
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NCHRP	National Cooperative Highway Research Program
NEHRP	National Earthquake Hazards Reduction Program
NEHRPA	National Earthquake Hazards Reduction Program Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System

NRCS	Natural Resources Conservation Service
NRSS	National Agriculture Statistics Service
OHP	California Office of Historical Preservation
OPR	California Office of Planning and Research
OWTS	Onsite Wastewater Treatment Systems
OWTS Manual	Onsite Wastewater Treatment System Guidance Manual
PAC	Policy Advisory Committee
PCBs	polychlorinated biphenyls
PCE	Passenger Car Equivalent
PG&E	Pacific Gas and Electric
pH	potential hydrogen
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
PPV	peak particle velocity
PRC	Public Resources Code
PRDs	Permit Registration Documents
PRO	Industrial Process Supply
proposed project	S. Stamoules, Inc. Pistachio Processing Facility Project
RCRA	Resource Conservation and Recovery Act
REC-1	Contact Recreation
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SARA III	Title III of the Federal Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBX7-7	Senate Bill 7 of Special Extended Session 7
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazard Mapping Act
SHPO	State Office of Historic Preservation
SJVAPCD	San Joaquin Valley Air Pollution Control District

SLCP	short-lived climate pollutants
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SPL	sound power level
SR-168	State Route 168
SR-180	State Route 180
SR-198	State Route 198
SSJVIC	Southern San Joaquin Valley Information Center
State OWTS Policy	Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems
STC	sound transmission coefficient
Subbasin	Westside Subbasin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCR	tribal cultural resource
TDS	Total Dissolved Solids
TIS	Traffic Impact Study
TIS Guidelines	Draft Guidelines for the Preparation of Traffic Impact Studies
TMDL	Total Maximum Daily Load
TPA	Transit Priority Area
TPZ	timerland production zone
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USGS	United States Geological Survey
UST	underground storage tank
v/c	volume to capacity
VdB	vibration velocity decibels

VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VMT Guidelines	Fresno County SB 743 Implementation Regional Guidelines
Waste Discharge Report	Technical Report for the Report of Waste Discharge
WDRs	Waste Discharge Requirements
ZEV	zero emission vehicle
ZNE	zero net energy

1.0 EXECUTIVE SUMMARY

This chapter provides an overview of the purpose of this Environmental Impact Report (EIR), proposed project and its environmental impacts based on the analysis included in this EIR, including a discussion of alternatives and cumulative project impacts. As required under the California Environmental Quality Act (CEQA), this chapter also includes potential areas of public controversy known to Fresno County, the lead agency for the proposed project.

1.1 PURPOSE

This Draft EIR has been prepared in accordance with CEQA to evaluate the potential environmental impacts associated with the implementation of Tract 6343. This EIR has been prepared in conformance with CEQA, California Public Resources Code (PRC) Section 21000 et seq; the *State CEQA Guidelines* (California Code of Regulations [CCR], Title 14, Section 15000 et seq); and the rules, regulations, and procedures for implementing CEQA as adopted by the County of Fresno (herein referred to as the County).

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

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

1.2 PROJECT SUMMARY

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

1.2.1 Project Location

The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is located in an agricultural area of Fresno County and is surrounded by orchards and row crops. The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The

San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site.

1.2.2 Project Description

The proposed project would consist of building a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Trucks carrying pistachios from the Project Applicant's orchards would deposit their load on a conveyor belt system that would transport the pistachios through different sections of the proposed facility that include a huller building, a propane-powered dryer area, a drive-over dump pit area, and an area with storage silos. The proposed project would be implemented in four phases, and each phase would include the construction and addition of buildings, working areas and equipment to increase the capacity of the project site.

1.2.2.1 Phase I

Phase I would occur in 2024 and would include the construction of an approximately 5,608 square foot drive-over dumping pit area, where trucks carrying pistachios would unload goods into four approximately 9x10-foot pit stations. A 3,900-square-foot pre-cleaning area would contain equipment to eliminate large debris from the pistachio loads. A huller building with an area of approximately 22,940 square feet and approximately 42 feet in height would also be constructed. The building would be of industrial-style construction with insulated metal panel exterior walls. Ten approximately 26-foot-long, 8-foot-wide and 29-foot-tall dryers and 18 approximately 52-foot-wide and 50-foot-tall galvanized steel silos, each of 2,200,000-pound capacity, would be added to the project site west of the proposed huller building.

1.2.2.2 Phase II

Phase II would occur between 2025 and 2027, and would include the construction of the processing building, an approximately 155,169-square-foot, steel-framed, industrial-style building with insulated metal panel exterior walls. The processing building would be located south of the huller building constructed during Phase I.

1.2.2.3 Phase III

Phase III would occur between 2028 and 2029 and would include the installation of the processing equipment inside the processing building constructed during Phase II. This equipment includes scales, baggers, hoppers, roasters, and forklifts. Additionally, 10 dryers and twelve silos with the same dimensions and style of those constructed during Phase I would be added adjacent to the existing dryers and storage silos in the project site.

1.2.2.4 Phase IV

Phase IV would occur between 2030 and 2031 and would include the construction of a second huller building, a second drive-over dumping pit area, and an additional pre-cleaning area with the same dimensions as the facilities constructed during Phase I. Additionally, 20 dryers and 30 silos with the same dimensions and style of those constructed during Phase I would be added to the north of the existing dryer and storage silo areas of the project site.

Additionally, the processed water from the facility would be conveyed via existing subsurface piping to irrigate approximately 3,740 acres of agricultural land owned by the owner, located approximately 2 to 6 miles northeast of the project site. The treated wastewater would be conveyed from the project site to surrounding crop fields through existing surface piping. The surface application of wastewater would be subject to the approval of a project Waste Discharge Requirements (WDRs) issued by the Regional Water Quality Control Board (RWQCB).

1.2.3 Project Objectives

The following is a list of objectives for the proposed project:

- Construct a pistachio hulling, processing, and packing facility on the proposed project site that can process pistachio crops harvested in the 7,500 acres of orchards owned by Stamoules Produce Company, and at full buildout, be able to process approximately 13,000 acres of the Project Applicant's additional pistachio orchards.

- Reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site.

- Allow the Project Applicant the undisrupted operation of a privately-owned pistachio processing facility.

1.2.4 Significant Unavoidable Adverse Impacts

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

- **Greenhouse Gas Emissions:** Potentially inconsistent with project attributes in the 2022 Scoping Plan GHG emission thresholds due to not meeting the Scoping Plan's natural gas or electric vehicle design criteria.

1.2.5 Lead Agency and Trustee Agencies

The Lead Agency for the proposed project is the County of Fresno. The County is the public agency that has the principal responsibility for certifying the EIR, approving or carrying out the project, 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. There are no agencies other than the County that have approval or permitting authority for the adoption of the proposed project

In addition, implementation of the proposed project would involve many responsible agencies depending upon the specifics of the subsequent projects. Following are some of the agencies that could be required to act as responsible agencies for the project:

- State Water Resources Control Board (SWRCB), National Pollutant Discharge Elimination System (NPDES) General Permit
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Central Valley Regional Water Quality Control Board (RWQCB)
- California Department of Fish and Wildlife (CDFW), Central Region
- California Department of Water Resources (DWR)

1.3 AREAS OF CONTROVERSY

A total of three written comment letters were submitted in response to the Notice of Preparation (NOP) and are included in Appendix A of this EIR. One verbal comments was received at the public scoping session held on July 25, 2022. Comments in response to the NOP generally identified the following areas of potential concern:

- The project's potential to result in impacts to historical and tribal cultural resources.
- The project's potential to impede access and circulation of vehicles from adjacent agricultural operations.
- The project's potential to result in roadway expansion improvements that would require encroachment of neighboring agricultural operations.
- The project's potential impacts on air quality and water quality in the vicinity.
- Evaluation of project construction and operational emissions.
- Evaluation of potential health risk impacts on surrounding receptors (residences, businesses, hospitals, day-care facilities, health care facilities, etc.) and mitigation of any potentially significant risk to help limit exposure of sensitive receptors to emissions.

The analyses included in the EIR are based on current regulatory requirements, including the current *State CEQA Guidelines*. An evaluation of the project's construction and operational emissions and health risk impacts were considered and addressed in Section 4.3, Air Quality. Comments pertaining to potential impacts to cultural and tribal cultural resources were addressed in Section 4.5, Cultural and Tribal Cultural Resources, of this EIR. Comments pertaining to impacts to water quality were addressed in Section 4.10, Hydrology and Water Quality, of this EIR. Comments related to potentially unsatisfactory LOS and encroachment of improvements in adjacent land uses are addressed in Section 4.13, Transportation, of this EIR. Evaluation of cumulative impacts and existing environmental conditions were considered and addressed throughout the EIR and finally, comments related to alternatives to the project were considered and addressed in Chapter 5.0, Alternatives.

1.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained Chapter 4.0, Evaluation of Environmental Impacts, and Chapter 6.0, Other CEQA Considerations, of this EIR. In determining that an EIR was the appropriate environmental document, the County also determined that the following environmental resource topics would be analyzed in detail for the proposed project: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use Planning, Noise, Transportation and Utilities and Service Systems. Other environmental resource topics not included in Chapter 4.0 of the EIR are analyzed in Chapter 6.0 of this EIR and include: Mineral Resources, Population and Housing, Public Services, Recreation, and Wildfire.

1.4.1 Significant Impacts

CEQA defines a significant impact on the environment as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." As discussed in more detail in Chapters 4.0, Evaluation of Environmental Impacts, impacts in the following areas would be potentially significant without the implementation of mitigation measures but would be reduced to a less than significant level if the mitigation measures recommended in this report are implemented: Section 4.2, Agriculture and Forestry Resources; Section 4.3, Air Quality; Section 4.4, Biological Resources; Section 4.5, Cultural and Tribal Cultural Resources; and Section 4.7, Geology and Soils.

1.4.2 Significant Unavoidable Impacts

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

- **Greenhouse Gas (GHG) Emissions:** Potentially inconsistent with project attributes in the 2022 Scoping Plan GHG emission thresholds due to not meeting the Scoping Plan's natural gas or electric vehicle design criteria.

1.4.3 Cumulative Impacts

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. These impacts can result from the proposed project when combined with other past, present, or reasonably foreseeable future projects. As described in Chapter 4.0 of this EIR, the cumulative impacts analysis in this EIR is based on information provided by the County on currently planned, approved, or proposed projects and regional projections for the project area.

1.4.4 Alternatives to the Project

In accordance with CEQA and the *State CEQA Guidelines* (Section 15126.6), an EIR must describe a reasonable range of alternatives to the project, or to the project's location, that could attain most of the project's basic objectives while avoiding or substantially lessening any of the significant adverse environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives that are feasible and necessary to permit a reasoned choice. *State CEQA Guidelines* state that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The alternatives to the proposed project that are discussed and analyzed in Chapter 5.0 Alternatives of this EIR are:

- **No Project Alternative:** Under the No Project Alternative, the project site would not be developed, and existing land uses would remain. No modifications to existing site access or infrastructure would occur.

- **Reduced Project Alternative:** Under the Reduced Project Alternative, only Phase I of the proposed project would be developed. Proposed site access would remain the same as that identified for the proposed project. Infrastructure improvements would be limited to those required to serve the project under Phase I.

- **Off-Site Alternative:** Under the Off-Site Alternative, the project would be developed at an alternate location, Assessor's Parcel Number (APN) 019-160-31S, an approximately 477.4-acre site located approximately 1 mile east of the project site. Proposed phasing and development under this alternative would remain the same as identified for the proposed project.

Each alternative is compared to the proposed project and discussed in terms of its various mitigating or adverse effects on the environment. Analysis of the alternatives focuses on those topics for which significant adverse impacts would result from the proposed project.

1.5 EXECUTIVE SUMMARY MATRIX

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

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1: AESTHETICS			
Impact AES-1: The project would not have a substantial adverse effect on a scenic vista.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No Impact	No mitigation is required.	No Impact
Impact AES-3: The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point), and due to the location of the project in an urbanized area, the project would conflict with applicable zoning and other regulations governing scenic quality.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AES-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AES-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to aesthetics.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.2: AGRICULTURAL AND FORESTRY RESOURCES			
Impact AG-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AG-2: The project would conflict with existing zoning for agricultural use or a Williamson Act contract.	Potentially Significant Impact	**Mitigation Measure AG-2:** Prior to issuance of building permits, the Project Applicant shall submit for non-renewal of the Williamson Act contract at the 98-acre portion of Accessor's Parcel Number (APN) 019-150-64S associated with proposed project facilities.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code section.51104(g)).	No Impact	No mitigation is required.	No Impact
Impact AG-4: The project would not result in the loss of forest land or conversion of forest land to non-forest use.	No Impact	No mitigation is required.	No Impact
Impact AG-5: The project would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AG-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to agricultural resources.	Potentially Significant Impact	Refer to Mitigation Measure AG-2 above.	Less than Significant Impact
4.3: AIR QUALITY			
Impact AIR-1 The project would not conflict with or obstruct implementation of the applicable air quality plan	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AIR-2: The project would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standards.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact AIR-4: The project would result in significant odors that could adversely affect a substantial number of people.	Potentially Significant Impact	**Mitigation Measure AIR-4:** Prior to issuance of grading or building permits, the project applicant shall develop an odor control plan detailing all methods of nuisance odor control as it applies to operation of the proposed settling ponds, and shall submit it to the SJVACPD and the County of Fresno Department of Public Works and Planning for approval. The odor control plan shall be made available to all employees and shall be used as a training aid for new employees.	Less than Significant Impact
Impact AIR-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to air quality.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.4: BIOLOGICAL RESOURCES			
Impact BIO-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Potentially Significant Impact	**Mitigation Measure BIO-1.1:** **Nesting Bird Surveys and Active Nest Avoidance.** Any initial ground disturbance or tree pruning, or removal should take place outside of the active nesting bird season (i.e., February 1–September 30), when feasible, to avoid impacts to nesting birds protected under the California Fish and Game Code and Migratory Bird Treaty Act. Should phased construction require tree removal or initial ground disturbance to ruderal areas, a qualified biologist shall conduct a nesting bird survey no more than 15 days prior to each phase of clearing activities. If nesting birds are discovered during preconstruction surveys, the biologist shall identify an appropriate buffer where no clearing, grading, or construction activities with potential to have direct or indirect impacts on the nesting bird(s) are allowed to take place until after the nest is no longer active (e.g., the young birds have fledged), or as otherwise determined by the qualified biologist. **Mitigation Measure BIO-1.2:** **Surveys for Roosting Bats and Avoidance of Bat Roosts.** Any tree pruning or removal could disturb roosting bats,	Potentially Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		should they be present in any of the trees located within or immediately adjacent to the project site. To avoid potential impact to maternity bat roosts, pruning or removal of trees should occur outside of the period between April 1 and September 30, if feasible. If pruning or removal of mature trees is to occur between April 1 and September 30, a qualified biologist shall conduct a preconstruction survey in search of day-roosting bats, dead carcasses, fecal matter, or staining of guano within 30 days of construction. If no evidence is found, tree pruning, or removal can commence without harm to bats. Should the preconstruction survey show evidence of nonbreeding day-roosts for bats, the bats can be humanely evicted via two-stage removal of trees, under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs. If a maternity colony is detected, the biologist shall identify an appropriate buffer (50–100 feet) where no clearing, grading, or construction activities with potential to have direct or indirect impacts on the roosting bat(s) are allowed to take place. Construction activities, including tree pruning or removal, can commence once the roost is deemed no longer active by the qualified biologist.	
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact BIO-3: The project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact BIO-4: The project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact BIO-7: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to biological resources.	Potentially Significant Impact	Refer to Mitigation Measure BIO-1.1 and BIO-1.2 above.	Less than Significant Impact
4.5: CULTURAL AND TRIBAL CULTURAL RESOURCES			
Impact CUL-1: The project would cause substantial adverse change in the significance of a historical resource pursuant to §15064.5	Potentially Significant Impact	**Mitigation Measure CUL-1:** If previously unknown resources are encountered before or during grading activities, construction shall stop within 50 feet 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 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 *State CEQA Guidelines*. If the resources are determined to be unique archaeological resources as defined under Section 15064.5 (c) (1) of the *State CEQA Guidelines*, measures shall be identified by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of green space,	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		parks, or open space in undeveloped areas of the project site, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the protection measures. Any historical artifacts recovered as a result of mitigation shall be provided to a Lead Agency-approved institution or person who is capable of providing long-term preservation to allow future scientific study. A report of findings shall also be submitted to the Southern San Joaquin Valley Information Center.	
Impact CUL-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5	Potentially Significant Impact	Refer to Mitigation Measure CUL-1 above.	Less than Significant Impact
Impact CUL-3: The project would disturb any human remains, including those interred outside of formal cemeteries	Potentially Significant Impact	**Mitigation Measure CUL-3:** In the event that human remains are unearthed during excavation and grading activities of the 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 (MLD) 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 MLDs regarding their recommendations, if applicable, and taking into account the possibility of multiple human remains. The	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		landowner shall discuss and confer with the MLDs all reasonable options regarding their preferences for treatment.	
Impact CUL-4: The project would result in a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially Significant Impact	Refer to Mitigation Measures CUL-1 and CUL-3 above.	Less than Significant Impact
Impact CUL-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to cultural and tribal cultural resources.	Potentially Significant Impact	Refer to Mitigation Measures CUL-1 and CUL-3 above.	Less than Significant Impact
4.6: ENERGY			
Impact EN-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact EN-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact EN-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to energy	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.7: GEOLOGY AND SOILS			
Impact GEO-1: Directly or Indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Strong seismic ground shaking.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Seismic-related ground failure, including liquefaction.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Landslides.	No Impact	No mitigation is required.	No Impact
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant Impact	**Mitigation Measure GEO-6:** In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop within 50 feet of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a Lead Agency-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	Less than Significant Impact
Impact GEO-7: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to geology and soils.	Potentially Significant Impact	Refer to Mitigation Measures GEO-6 above.	Less than Significant Impact
4.8: GREENHOUSE GAS EMISSIONS			
Impact GHG-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Potentially Significant Impact	No feasible mitigation measures are available.	Significant and Unavoidable
Impact GHG-2: The project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Potentially Significant Impact	No feasible mitigation measures are available.	Significant and Unavoidable

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to greenhouse gas emissions.	Potentially Significant Impact	No feasible mitigation measures are available.	Significant and Unavoidable
4.9: HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous material	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-4: The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-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, the proposed project would not expose people residing or working in the project area to excessive noise levels.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact HAZ-8: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to hazards and hazardous materials.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.10: HYDROLOGY AND WATER QUALITY			
Impact HYD-1: The project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			
Result in substantial erosion or siltation on or off site	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
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.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impede or redirect flood flows.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact HYD-4: In flood hazard, tsunami, or seiche zones, the project would not risk release of pollutants due to project inundation.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact HYD-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to hydrology.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.11: LAND USE PLANNING			
Impact LU-1: The project would not physically divide an established community.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact LU-2: The project would not cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact LU-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to land use and planning.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.12: NOISE			
Impact NOI-1: The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact NOI-2: The project would not generate excessive ground-borne vibration or ground-borne noise levels.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-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, the proposed project would not expose people residing or working in the project area to excessive noise levels.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact NOI-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to noise.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.13: TRANSPORTATION			
Impact TRA-1: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact TRA-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact TRA-3: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact TRA-4: The project would not result in inadequate emergency access.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact TRA-5.: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to transportation.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
4.14: UTILITIES			
Impact UTL-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact UTL-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact UTL-3: The project would 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.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact UTL-4: The project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact UTL-5: The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact
Impact UTL-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to utilities.	Less than Significant Impact	No mitigation is required.	Less than Significant Impact

2.0 INTRODUCTION

2.1 PURPOSE OF THIS EIR

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

This EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the potential environmental impacts associated with construction of the proposed project. This EIR identifies potential environmental impacts resulting from the proposed project and identifies potential mitigation measures and alternatives to reduce potential environmental impacts.

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

2.2 ENVIRONMENTAL REVIEW PROCESS

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

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

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

2.3 INTENDED USES OF THIS EIR

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

This EIR is intended as an informational document to: (1) evaluate the proposed project and the potential for significant impacts on the environment; (2) examine methods of reducing adverse environmental impacts; (3) identify any significant and unavoidable adverse impacts that cannot be mitigated; and (4) identify reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental effects or reduce the impacts to a less than significant level. The Lead Agency is required to consider the information in the EIR, along with any other relevant information, in making its decisions on the proposed project. This analysis, in and of itself, does not determine whether a project will be approved, but aids the planning and decision-making process by disclosing the potential for significant and adverse impacts.

In conformance with CEQA and the *State CEQA Guidelines*, this EIR provides objective information addressing the environmental consequences of the project and identifies possible means of reducing or avoiding significant impacts, either through mitigation measures or feasible project alternatives. The County of Fresno must certify the Final EIR prior to project approval and implementation. Under *State CEQA Guidelines* Section 15168, this is a project-level EIR. This type of EIR examines a specific project and considers potential construction and operational impacts of implementing the project.

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

- **Information Document:** An EIR is an informational document that will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (*State CEQA Guidelines* Section 15121(a)).

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

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

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

2.4 PROPOSED PROJECT

The proposed project would build a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Trucks carrying pistachios from the Project Applicant's orchards would deposit their load on a conveyor belt system that would transport the pistachios through different sections of the proposed facility, including a huller building, a gas-powered dryer area, a drive-over dump pit area, and an area with storage silos. The proposed project would be implemented in four phases, and each phase would include the construction and addition of buildings, working areas, and equipment to increase the capacity of the project site. Additionally, the treated processed wastewater from the facility would be conveyed via existing subsurface piping to irrigate approximately 3,740 acres of agricultural land owned by the Project Applicant, located approximately two to six miles to the northeast of the project site.

2.5 EIR SCOPE

A Notice of Preparation (NOP) of the EIR was circulated for 30 days beginning July 8, 2022, to help identify the types of impacts that could result from implementation of the proposed project, as well as potential areas of controversy. The NOP was mailed to public agencies, organizations, and individuals likely to be interested in the project and its potential impacts. Additionally, a public scoping meeting to inform interested parties and the public about the proposed project was held at 6:00 p.m. on July 25, 2022. A total of three comment letters regarding the NOP were received in addition to the verbal comments provided at the scoping session. Copies of the NOP and the comment letters are included in Appendix A.

The following potentially significant environmental issue topics will be analyzed in detail in this EIR:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use Planning
- Noise
- Transportation
- Utilities and Service Systems

2.6 REPORT ORGANIZATION

This EIR is organized into the following chapters:

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

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

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

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

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

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

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

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

2.7 Public Participation

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

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

The Draft EIR 45-day public review and comment period for this project began on November 1, 2023 and will end on December 18, 2023.

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

Ejaz Ahmad, Planner
Department of Public Works and Planning
Development Services Division
2220 Tulare Street, 6th Floor
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(559) 600-4204
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3.0 PROJECT DESCRIPTION

This chapter describes the proposed S. Stamoules, Inc. Pistachio Processing Facility Project (proposed project) evaluated in this Draft Environmental Impact Report (EIR). This chapter includes a description of the project location, a list of project objectives, a description of proposed project components, and a list of required approvals and entitlements. The County of Fresno is the California Environmental Quality Act (CEQA) Lead Agency and has final authority to approve the proposed project. Information presented in this chapter was derived from the site plan dated September 4, 2020, and the operational statement dated March 31, 2023, and serves as the basis for the environmental analysis contained in this Draft EIR.

3.1 PROJECT LOCATION AND SETTING

The following section describes the location and characteristics of the project site and provides a brief overview of the existing land uses within and in the vicinity of the project site.

3.1.1 Location

The proposed project would consist of development of a 98-acre project site and irrigation of approximately 3,740 acres of pistachio orchards. The project site is located within one 316.2-acre parcel (Assessor's Parcel Number [APN] 019-150-64S) that is approximately 98 acres in size and currently under a Williamson Act contract. The project site is currently open farm ground and is not developed. The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is located in an agricultural area of Fresno County and is surrounded by orchards and row crops. The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site. Vehicular access to the project site is provided by West Panoche Road, and no public transportation routes are present in the vicinity of the project site. Figure 3-1 shows the regional and local location of the project site. (All the figures are provided at the end of this chapter to enhance the readability of the text.)

The approximately 3,740-acre land application area (LAA) for the project is located approximately 2 to 6 miles northeast of the project site, on the northwest corner of South Newcomb Avenue and West Muscat Avenue, approximately 9.7 miles south of Firebaugh. Section 3.3.2.3 below provides greater detail on the location of the project LAA.

3.1.2 Project Site Characteristics and Surrounding Conditions

The project site is currently used for agricultural operations and is surrounded by active farmland. Agriculture crops that have been historically grown on the project site include pistachio, tomatoes, oats, barley, and cotton.[1] The project site is currently used to grow cantaloupe. The Pilibos Ranch is

[1] United States Department of Agriculture (USDA). National Agriculture Statistics Service (NRSS). 2021. CropScape-Cropland Data Layer. Website: https://nassgeodata.gmu.edu/CropScape/ (accessed April 2023).

located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project site and is publicly accessible by a driveway from West Panoche Road, southwest of the project site. Other agriculture-supporting buildings are located in the vicinity of the project site. Figure 3-2 shows the project site and surrounding land uses.

3.1.3 Zoning

The project site is located within the Exclusive Agricultural District (AE-20). The AE-20 District is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related uses of the land that could be detrimental to the physical and economic well-being of the community. Uses permitted within the AE-20 District include the harvesting, curing, processing, packaging, shipping, and selling of agricultural products, among other activities, subject to a conditional use permit and applicable limitations stated in Section 816 of the County of Fresno (County) zoning ordinance.

3.2 PROJECT OBJECTIVES

The following is a list of project objectives of the proposed project:

- Construct a pistachio hulling, processing, and packing facility on the proposed project site that can process pistachio crops harvested in the 7,500 acres of orchards owned by Stamoules Produce Company and, at full buildout, be able to process approximately 13,000 acres of the Project Applicant's additional pistachio orchards.

- Reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site.

- Allow the Project Applicant the undisrupted operation of a privately-owned pistachio processing facility.

3.3 PROPOSED PROJECT

This section provides a description of the proposed project as identified in the materials provided by S. Stamoules Inc. (Project Applicant), dated March 31, 2023. The Project Applicant proposes to build a pistachio hulling, processing, and packing facility that can process pistachio crops from surrounding pistachio orchards. Trucks carrying pistachios from the Project Applicant's orchards would deposit their load on a conveyor belt system that would transport the pistachios through different sections of the proposed facility that include a huller building, a propane-powered dryer area, a drive-over dump pit area, and an area with storage silos. The phases and scope of this project are described below. Figure 3-3 shows the proposed site plan, and Figure 3-4 shows a partial site plan that includes only the proposed components of the project. The proposed huller building, to be constructed in Phase I and Phase IV, is shown on Figure 3-5. Figure 3-6 shows the proposed silos and dryers to be constructed in Phase I, Phase III, and Phase IV. Figure 3-7 shows the proposed drive-over pits to be constructed in Phase I and Phase IV of the proposed project.

3.3.1 Building Program

The proposed project would be implemented in four phases, and each phase would include the construction and addition of buildings, working areas, and equipment to increase the capacity of the project site as described in this chapter. By buildout of Phase IV, project facilities would occupy a total area of approximately 93.5 acres (4,072,860 square feet) within the 98-acre project site.

3.3.1.1 Phase I

Phase I would occur in 2024 and would include the construction of an approximately 5,608-square-foot drive-over dumping pit area, where trucks carrying pistachios would unload goods into four approximately 9x10-foot pit stations. A 3,900-square-foot pre-cleaning area would contain equipment to eliminate large debris from the pistachio loads. A huller building with an area of approximately 22,940 square feet and approximately 42 feet in height would also be constructed, as shown on Figure 3-5. The building would be of industrial-style construction with insulated metal panel exterior walls. Ten (10) approximately 26-foot-long, 8-foot-wide, and 29-foot-tall dryers and 18 approximately 52-foot-wide, 50-foot-tall galvanized steel silos, each of which having a 2,200,000-pound capacity, would be added to the project site west of the proposed huller building.

3.3.1.2 Phase II

Phase II would occur between 2025 and 2027, and would include the construction of the processing building, which is an approximately 155,169-square-foot, steel-framed, industrial-style building with insulated metal panel exterior walls. The processing building, as shown on Figure 3-4, would be located south of the huller building, which would be constructed during Phase I.

3.3.1.3 Phase III

Phase III would occur between 2028 and 2029, and would include the installation of the processing equipment inside the processing building constructed during Phase II. This equipment includes scales, baggers, hoppers, roasters, and forklifts. Additionally, 10 dryers and 12 silos with the same dimensions and style of those constructed during Phase I would be added adjacent to the existing dryers and storage silos in the project site.

3.3.1.4 Phase IV

Phase IV would occur between 2030 and 2031, and would include the construction of a second huller building, a second drive-over dumping pit area, and an additional pre-cleaning area with the same dimensions as the facilities constructed during Phase I. Additionally, 20 dryers and 30 silos with the same dimensions and style of those constructed during Phase I would be added to the north of the existing dryer and storage silo areas of the project site.

3.3.2 Utilities and Infrastructure

3.3.2.1 Water for industrial Processes and Fire Suppression

Water for both the internal processes of the proposed project and fire suppression would be supplied by an existing deep irrigation well located in the northeast corner of the site, approximately

2,840 feet from the Fattoria Cardella Ranch. According to the Well Completion Report[2] prepared for the existing well on site, the well's yield capacity is approximately 1,800 gallons per minute (gpm).

Water would be pumped from the existing well, conveyed via underground pipelines that would be designed to meet County requirements, through sand media filters, and stored in a 250,000-gallon capacity storage tank. Approximately 180,000 gallons of water would be allotted for fire suppression and would be available at all times during project operation.

A new domestic well meeting all applicable siting and development standards required by the County would be developed on the project site for potable water purposes. The location of the new domestic well has not yet been determined but would be proximate to the proposed pistachio processing facility to reduce the operational costs of water conveyance.

Most of the water used at the project site would be used during the peak of the harvest season between September and October. It is anticipated that Phase I would require between 1,000 gpm and 1,250 gpm of water for processing during the peak season, totaling 78.03 million gallons (239.5 acre-feet) annually. With completion of Phase IV, the proposed project is expected to use between 4,000 gpm and 5,000 gpm of water during the peak season, which equates to approximately 311.4 million gallons (955.5 acre-feet) annually. The existing groundwater well on site is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two additional 500,000-gallon storage tanks for operational water retention.[3]

3.3.2.2 Stormwater Management

The proposed project would obtain and comply with the requirements of a National Pollutant Discharge Elimination System (NPDES) General Construction Permit, which would regulate potential stormwater pollutant discharges during project construction through the preparation of a Stormwater Pollution Prevention Plan (SWPPP).

The proposed project would be designed to collect and direct stormwater and other runoff from the site towards an on-site infiltration basin. Proposed stormwater collection and drainage infrastructure on the site would include inlets, catch basins, underground stormwater pipelines, and an infiltration basin that would be constructed on the eastern portion of the site. Although the exact location of the basin has not yet been determined, the basin would be constructed in the eastern portion of the project site and following existing drainage patterns.

Additionally, although plans for the proposed infiltration basin have not yet been finalized, the proposed stormwater infrastructure for the project would be required to comply with post-construction stormwater performance standards required by the General Construction Permit, including runoff volume and stormwater pollution management requirements, which would be implemented through the preparation of a post-construction Water Quality Management Plan that

[2] California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.

[3] County of Fresno. September 13, 2023. Ejaz Ahmad, Planner, personal communication.

would be reviewed and approved by the County. Furthermore, pursuant to County requirements for development projects, the Project Applicant would be required to prepare and submit a Grading and Drainage Plan to the County for review and approval. The proposed Grading and Drainage Plan would be prepared by a California-licensed Civil Engineer or Architect and would require project compliance with applicable Improvement Standards[4] for drainage systems in unincorporated Fresno County and with grading specifications outlined in Chapter 15.28, Grading and Excavation, of the County of Fresno Code of Ordinances.

3.3.2.3 Solid and Liquid Waste

Processing Waste. During the harvest season (i.e., September 1 to mid-November), it is estimated that the project site would produce approximately 8,562,667 pounds of solid waste, including leaves, twigs, dirt, broken hulls, culls rejected due to some deficiency, and shells with no pistachio meat.

The proposed project would generate approximately 311.4 million gallons of wastewater (955.5 acre-feet) annually by Phase IV. Wastewater produced at the proposed project facility would be directed towards lined settling ponds located in the southwest end of the project site for treatment. Larger debris would be removed from the wastewater with screens before entering the settling ponds, where finer debris would be allowed to settle before removal at the end of the harvest season. The organic waste material obtained from the cleaning process would be transported off site to firms that provide composting services or to ranches for cattle feed.

Treated wastewater would be used to supplement the irrigation and nutrient needs of the Project Applicant's 3,740 acres of pistachio orchards, located approximately 2 to 6 miles northeast of the project site. The treated wastewater would be conveyed from the project site to surrounding crop fields through existing surface piping. The surface application of wastewater would be subject to the approval of a project Waste Discharge Requirements (WDR) issued by the Regional Water Quality Control Board (RWQCB). Figure 3-8, Project Vicinity Map, and the APNs listed below indicate the location of the LAA for project wastewater.

- 012-180-03
- 012-180-19S
- 012-180-20S
- 019-040-13S
- 019-040-14S
- 019-040-22S
- 019-040-23S
- 019-040-25S
- 019-040-28S
- 019-050-44S
- 019-050-62S
- 019-050-63S
- 019-050-64S

Sanitary Sewage. A proposed septic system would manage sanitary sewage waste that is generated on site. The proposed septic system would be designed and installed pursuant to regulations and required permits from the Fresno County Department of Public Works and Planning (FCPWP). Although the location for the proposed septic system, including the septic tank and leach field, has

[4] County of Fresno. 1966. Improvement Standards for Fresno County. October. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/grading/fresnoco.imp.standards10-66.pdf (accessed October 2023).

not yet been determined, the proposed infrastructure would be installed proximate to the proposed processing facility to reduce operational costs.

Solid Waste. Project solid waste would consist of typical paper, carboard, glass, plastics, wrappers and minimal quantities of organic waste. All solid waste would be sorted and stored in accordance with applicable County recycling requirements. The project site would be served by Mid Valley Disposal, a private disposal service that would collect and convey recycled and other waste generated from daily operations.

3.3.2.4 Electricity and Natural Gas

Electricity and natural gas use at the project site would be supplied by Pacific Gas and Electric (PG&E). The proposed project would be implemented in four phases (Phases I through IV), and each phase would include the addition of processing buildings, working areas, and equipment to increase the capacity of the project site. Daily electrical and natural gas demand for these phases are shown in Table 3.A. The proposed project would connect to existing electric and natural gas infrastructure in the project vicinity with service connections provided by PG&E.

Table 3.A: Daily Electricity and Natural Gas Usage Under Project Phases

Phases	Equipment	Gas Demand	Electricity Demand
Phase 1	(2) Pit, (2) Pre-Cleaner, Huller Building, (10) Hullers, (10) Dryers, (18) Silos, Water Pumps	4.45 MMSCFD For Dryers, 1.49 MMSCFD For NG Electric Generators	4.47 MW
Phase 2	Processing Building (no change)	-	-
Phase 3	Process Equipment install in the Processing Building, add (10) Hullers, (10) Dryers, (12) Silos	4.45 MMSCFD For Dryers, 0.85 MMSCFD for NG Electric Generators	6.36 MW
Phase 4	Second (identical) Huller w/Pits, Pre-Cleaners, Huller Building, (20) Dryers, and (30) Silos	8.90 MMSCFD For Dryers, 2.34 MMSCFD For NG Electric Generators	8.94 MW

Source: Compiled by LSA (2022).
MMSCFD = million standard cubic feet per day
MW = megawatt
NG = natural gas

3.3.2.5 Processing Equipment

The project site would make use of both stationary and mobile processing equipment for the huller and the processing buildings. Table 3.B lists the equipment used in each area.

Each dryer installed in the huller building would come equipped with two electrically operated fans that would aid with air circulation in the huller area. The fans would be manufactured by Sukup Manufacturing Co., or another approved manufacturer for a similar fan unit. The manufacturer-provided noise promulgation results for the proposed fan units indicate the units would generate 73.1 decibels (dB) at 50 feet, or approximately 44.6 dB at the nearest property line.

Table 3.B: Stationary and Mobile Equipment for Huller and Processing Buildings

Stationary Processing Equipment for Huller Building	Stationary Processing Equipment for Processing Building	Mobile Equipment for Huller and Processing Buildings
● Truck Scale ● Conveyors ● Pre-Cleaners ● Hullers ● Float Tank ● Water Storage Tanks ● Collection Pumps ● Screener ● De-Twigger ● Dryers ● Gravity Deck ● Silos	● Scales ● Baggers ● Hoppers ● Roasters ● Forklifts	● Bobcats ● Font-End Loaders ● Forklifts

Source: *Conditional Use Permit Application Operational Statement for S. Stamoules, Inc. Pistachio Huller* (2023)

3.3.2.6 Landscaping and Site Fencing

No landscaping is proposed for the project site. There would be a chain-link security fence around the perimeter of the project site to control access consistent with food-safety requirements. Security staff would monitor the project site 24/7 in person or through security cameras.

3.3.3 Construction and Operation

3.3.3.1 Operational times

During peak pistachio harvest season, from September to October, the huller building in the project site would be operational from 6:00 a.m. to 11:00 p.m., 6 to 7 days a week. The processing building on the project site would be operational 5 days a week from 7:30 a.m. to 4:30 p.m. year-round, except during harvest season.

3.3.3.2 Access to Site and Parking Spaces

Vehicle access to the site would be via South Newcomb Avenue. Traffic directional signs would be installed per County standards near South Newcomb Avenue to aid drivers in identifying the site. All roads and parking areas within the project site would be paved. Tractors and field trucks would be expected to access the site from the surrounding orchards via unpaved farm roads. Thirty (30) paved employee parking spaces would be provided adjacent to the huller building.

3.3.3.3 Number of Employees, Customers, or Visitors

Only employees and delivery personnel would have regular access to the project site. It is estimated that approximately six daily trips to the project site related to deliveries and equipment maintenance services would occur.

During the harvest season, it is estimated that up to 14 employees would be on site during hours of operation, with 4 employees performing administrative tasks and 10 employees operating the pistachio processing facility. The proposed 14 employees for the project site would generate

approximately 54.9 total daily trips. As previously discussed, the processing and huller buildings would operate on different schedules, so the total number of employees on site would not be cumulative between the two areas and would never surpass 14 employees. The site would not have a resident caretaker.

During the off-season, it is estimated that a total of 4 employees would be present on the project site during operational hours, with 2 employees performing maintenance and other tasks, and 2 employees performing administrative tasks.

3.3.3.4 Project-Related Traffic

The proposed pistachio processing facility would process the pistachio harvest obtained from the Project Applicant's approximately 7,500 acres of existing pistachio orchards. Additionally, the Project Applicant would eventually develop an additional 13,000 acres of pistachio orchards, the crops from which would be directed towards the project site to be processed.

The harvest season varies from year to year but is estimated to span 84 days from September 1 to mid-November, with peak-harvest season occurring during the first 4 weeks (September to October). The hauling of raw pistachios, processed pistachios, and waste from the project site would generate truck trips that would vary during peak harvest season and during the off season.

During the typical harvest season and after expansion of the Project Applicant's pistachio orchards, it is estimated the facility will accept 131,733,333 pounds of raw material in trucks with a hauling capacity of 50,000 pounds. During processing, an estimated 14 percent or 18,442,667 pounds of liquid would be extracted from the raw pistachios, and 6.5 percent or 8,562,667 pounds of waste in the form of leaves, twigs, dirt, and broken hulls would be generated and discarded. The 131,733,333 pounds of incoming raw pistachios will create about 39,520,000 pounds of processed pistachios to be sold to wholesalers or retailers. The remaining 49.5 percent or 65,208,000 pounds are pistachio hulls, which would be transported to the proposed settling ponds on site where they would degrade and be cleared regularly from the ponds to be sold as livestock food supplement.

Table 3.C shows estimated project-related trips occurring during the pistachio peak-harvest season and off season.

3.3.3.5 Construction

Construction of the proposed project is expected to occur in four phases over a period of approximately 44 months starting in 2024. Construction is expected to occur consecutively, with each phase constructed separately. Site preparation would include removal of rocks, debris, and vegetation from the project site. Grading at the project site is expected to be balanced, and no import or export of soil is anticipated. Table 3.D shows the schedule of each project development phase.

Table 3.C: Estimated Project Truck Daily Trips

Trip Description	In	Out	Daily Average
Peak-Season Trips			
131,733,333 lbs of incoming raw material in 50,000 lb capacity trucks[1]	2,635	2,635	190
8,562,667 lbs of waste shipped to green waste recyclers in 50,000 lb capacity trucks[2]	171	171	12
Off-Season Trips			
65,208,000 lbs of marketable livestock supplement waste in 50,000 lb capacity trucks[3]	1,304	1,304	14
39,520,000 lbs of processed material shipped to wholesalers in 2,000 lb bags in 50,000 lb capacity trucks[4]	790	790	6

Source: *Conditional Use Permit Application Operational Statement for S. Stamoules, Inc. Pistachio Huller* (2023)
Note: For purposes of the traffic analysis, 1 month or 4 weeks has been considered as the peak-harvest season as a conservative approach. This is because the majority of the crops will be harvested and delivered to the facility during the first month.

1 131,733,333 lbs of incoming raw material ÷ 50,000 lb capacity trucks = 2,635 truck trips ÷ 28 days = 95 truck trips per day in and 95 truck trips per day out or 190 total daily trips during the peak harvest season.

2 8,562,667 lbs of waste ÷ 50,000 lb capacity trucks = 171 truck trips ÷ 28 days = 6 truck trips per day in and 6 truck trips per day out or 12 total daily trips during the peak harvest season.

3 65,208,000 lbs of marketable waste ÷ 50,000 lb capacity trucks = 1,304 truck trips ÷ 200 days = 7 truck trips per day in and 7 truck trips per day out or 14 total daily trips

4 39,520,000 lbs of processed material ÷ 50,000 lb capacity trucks = 790 truck trips ÷300 days = 3 truck trips per day in and 3 truck trips per day out or 6 total trips. To be clear, the facility will not process more than 30,000,000 pounds of material in any given year. Where the processed material is delivered, be it wholesale or retail in bulk, will not change volume or routing.

lb/lbs = pound/pounds

Table 3.D: Project Construction Schedule

Project Phase	Estimated Construction Period	Construction Scope
I	2024 (12-month period)	Pit, Pre-Cleaners, Huller Building, (10) Dryers, (18) Silos
II	2025–2027 (12-month period)	Processing Building (no equipment)
III	2028–2029 (8-month period)	Process Equipment installation in Processing Building, add (10) Dryers and (12) Silos at Huller Area
IV	2030–2031 (12-month period)	Second (identical) Huller w/Pits, Pre-Cleaners, Huller Building, (20) Dryers and (30) Silos

3.4 DISCRETIONARY ACTIONS AND USES OF THIS EIR

A number of permits and approvals, including discretionary actions, are listed in Table 3.E and would be required prior to implementation of the proposed project. As lead agency for the proposed project, Fresno County would be responsible for the majority of the approvals required for development. Other agencies may also have some authority related to the project and its approvals.

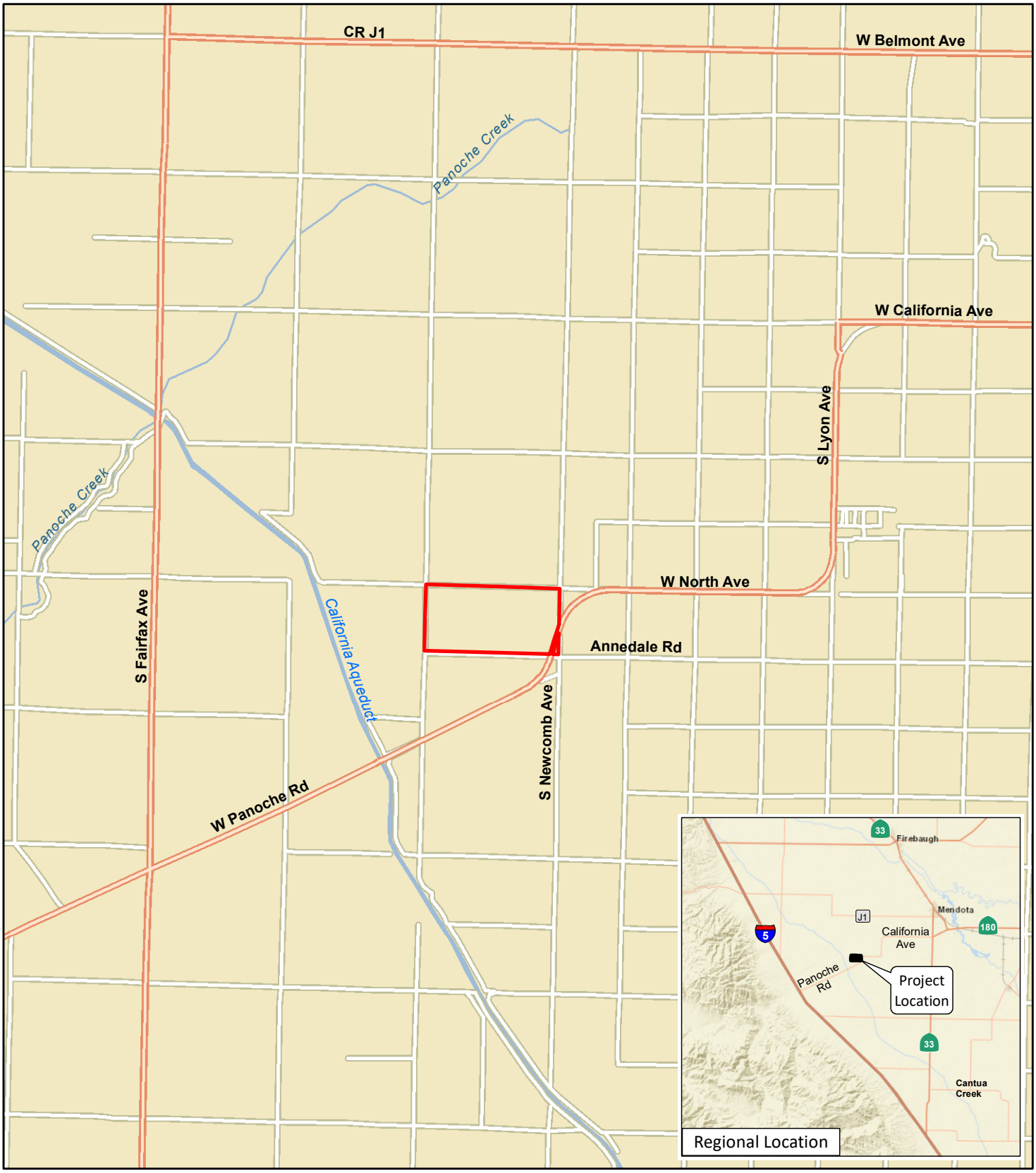
Table 3.E: Required Permits and Approvals

Agency	Permit/Approval
State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) General Construction Permit (with requisite Storm Water Pollution Prevention Plan, Conceptual Storm Water Pollution Prevention Plan, and Permanent Control Measures)
County of Fresno	Conditional Use Permits, Encroachment Permits, Grading Permits, Building Permits

Source: Compiled by LSA (2022).

In addition, implementation of the project may require permits or approvals from the following local, regional, State, and federal agencies:

- San Joaquin Valley Air Pollution Control District
- Fresno County Well Permit
- Central Valley Regional Water Quality Control Board (Waste Discharge Permit)
- California Department of Fish and Wildlife, Central Region
- State Department of Water Resources



LSA

LEGEND

Project Site

FIGURE 3-1

N

0 0.5 1

MILES

SOURCE: Esri World Street Map.

S. Stamoules, Inc. Pistachio Processing Facility Project
Fresno County, California

Regional and Local Location

\\AzCorp04\PTRImages\OPA2101\GIS\Maps\Project Description\Figure 3-1_Regional and Local Location.mxd (4/18/2022)

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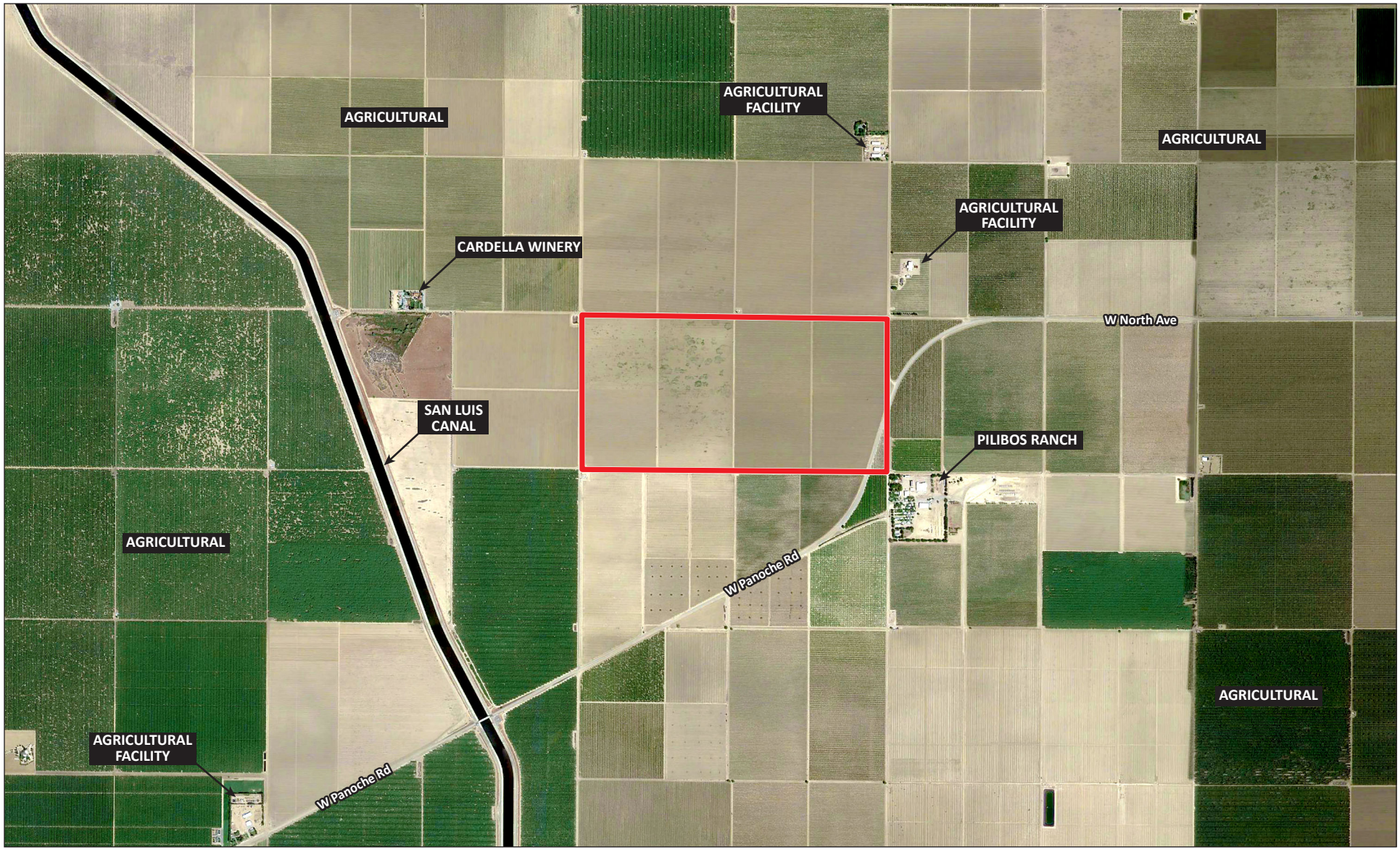

LSA

Project Site Boundary

N

0 1000 2000
FEET

FIGURE 3-2

S. Stamoules, Inc. Pistachio Processing Facility Project
Aerial Photograph of the Project Site and Surrounding Land Uses

SOURCES: Google Earth, 4/21/2021; LSA, 2021

FREProjects:\CFF2201 OPA Pistachio\PRODUCTS\Project Description\Figures\Figure 3-2.ai (4/19/2022)

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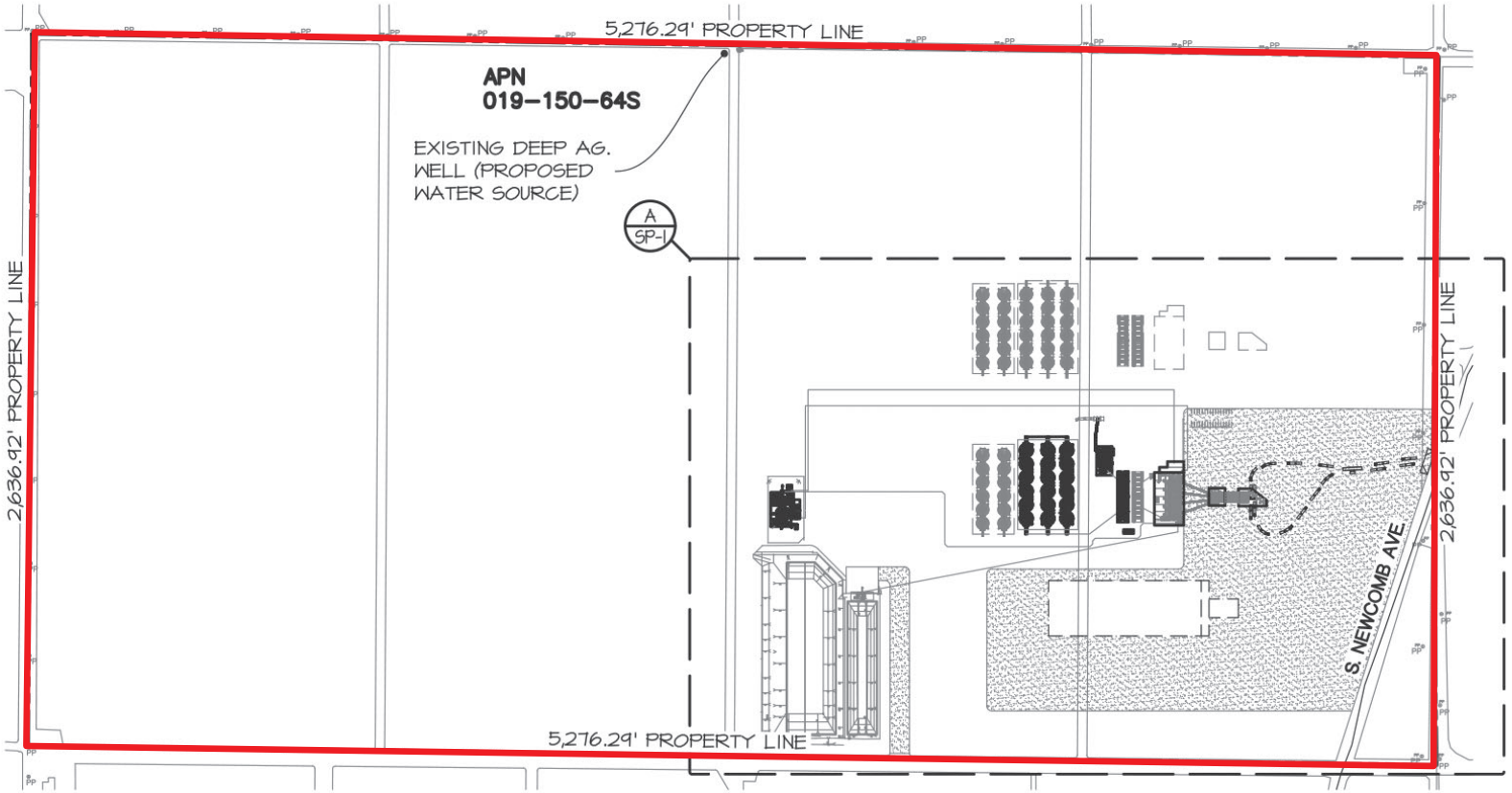

LSA

FIGURE 3-3

Project Site Boundary

N

NOT TO SCALE

SOURCE: Engel & Company, 2020

S. Stamoules, Inc. Pistachio Processing Facility Project
Project Site Plan

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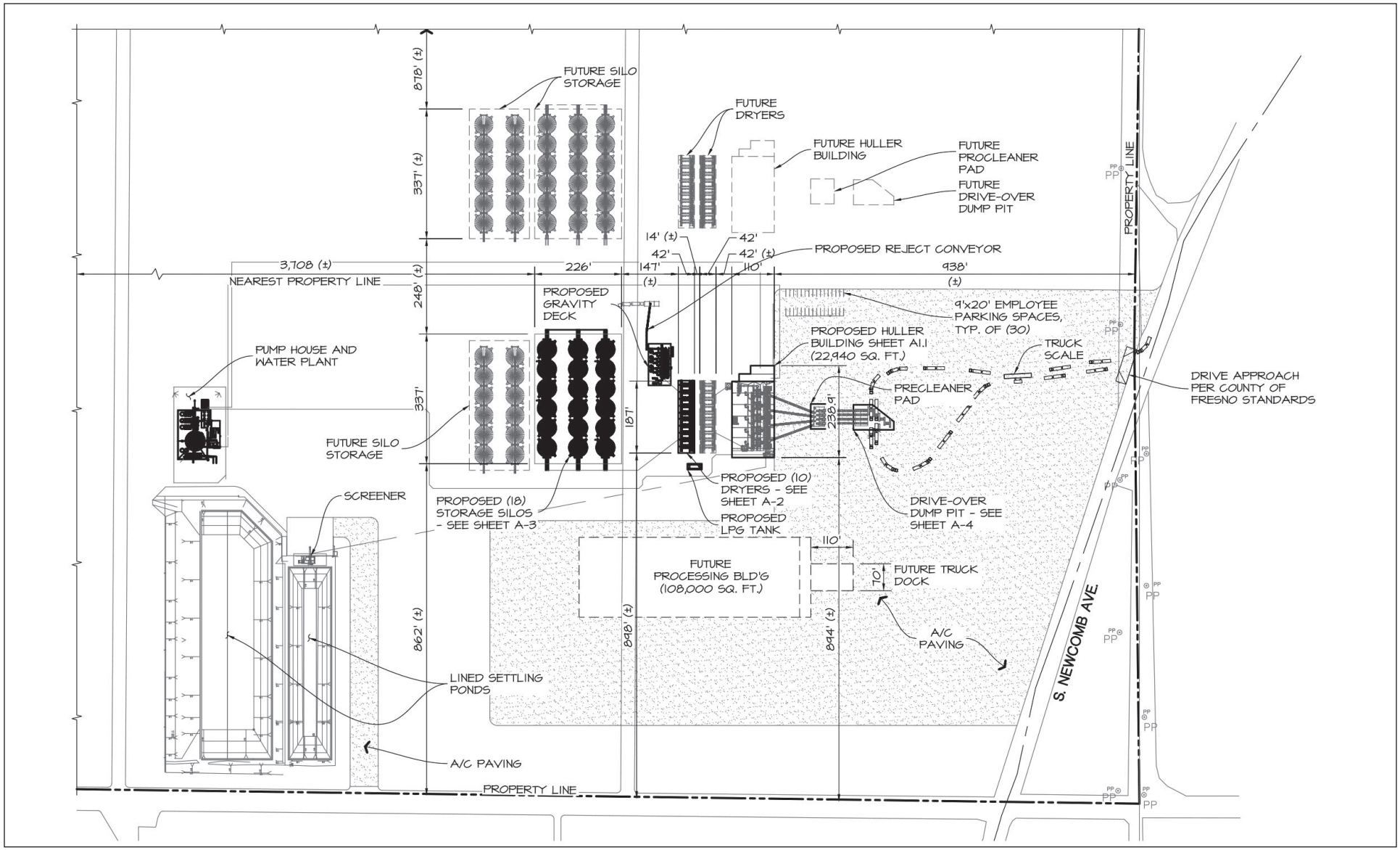

LSA

FIGURE 3-4

NOT TO SCALE

S. Stamoules, Inc. Pistachio Processing Facility Project
Partial Site Plan

SOURCE: Engel & Company, 2020

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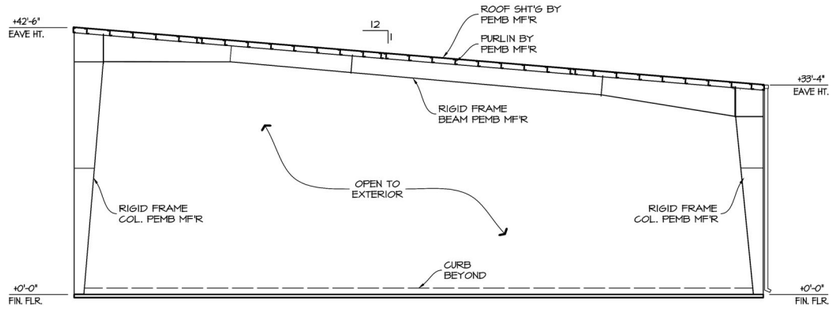
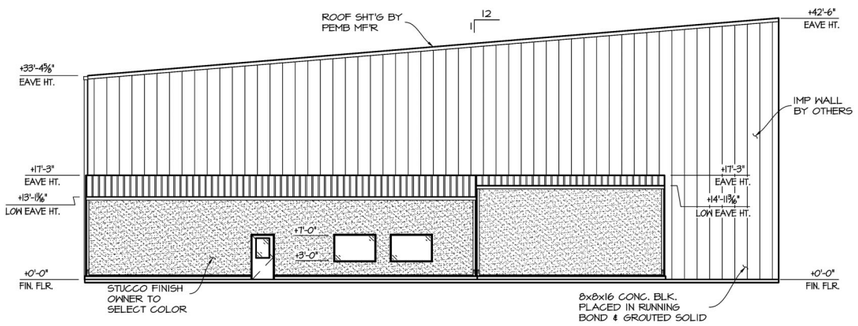
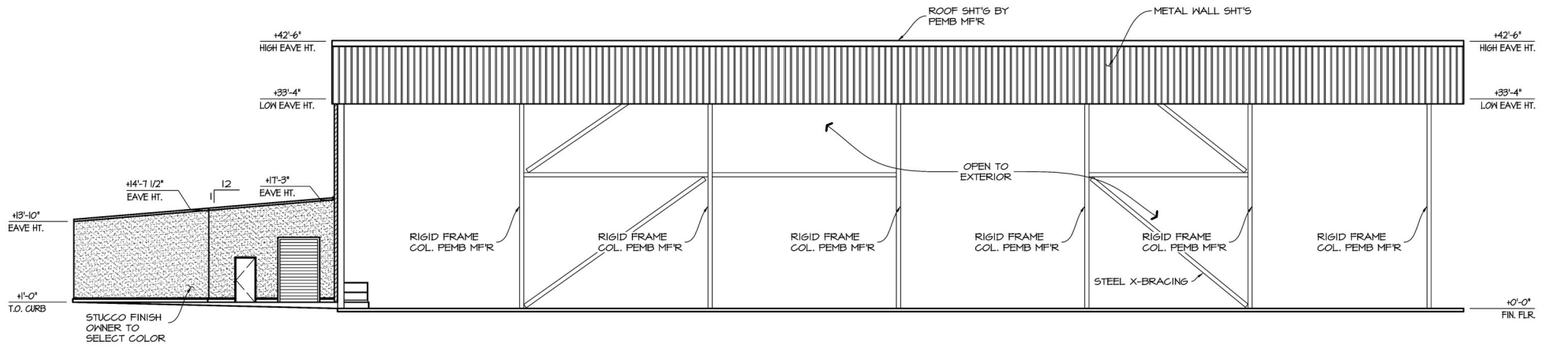


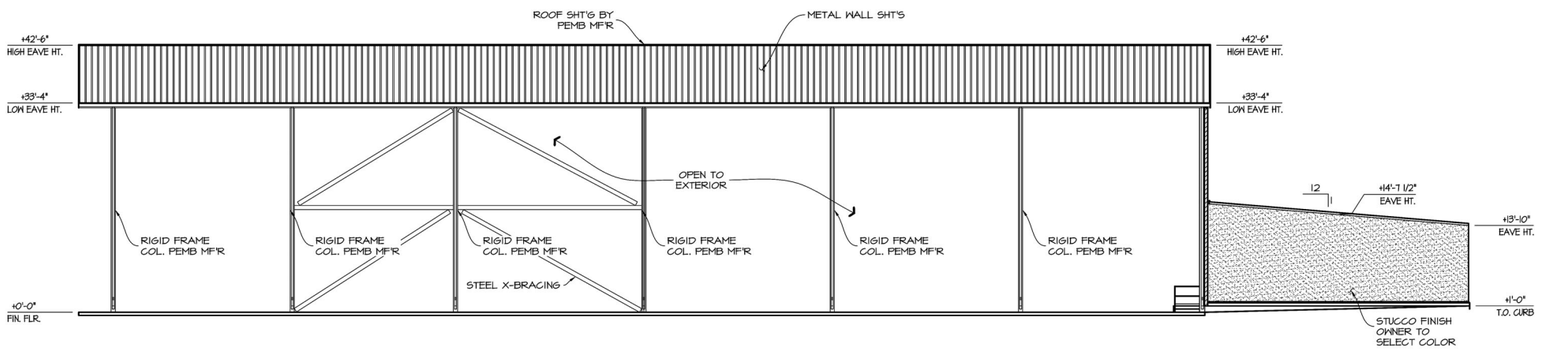
SOUTH
EXTERIOR ELEVATION



NORTH
EXTERIOR ELEVATION



WEST
EXTERIOR ELEVATION



EAST
EXTERIOR ELEVATION

LSA

FIGURE 3-5

NOT TO SCALE

S. Stamoules, Inc. Pistachio Processing Facility Project
Huller Building Elevations

SOURCE: Engel & Company, 2020

FREProjects:\CFF2201 OPA Pistachio\PRODUCTS\Project Description\Figures\Figure 3-5.ai (4/19/2022)

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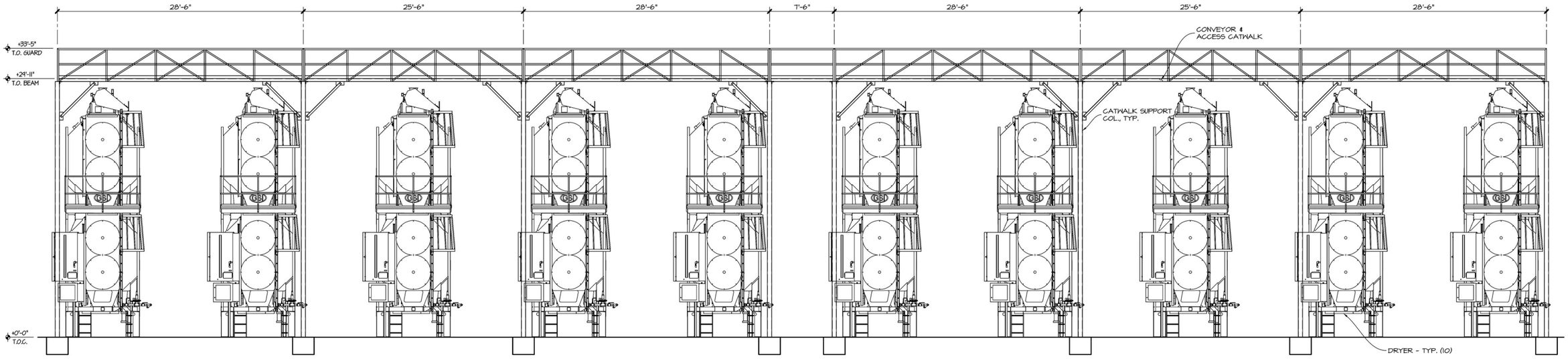
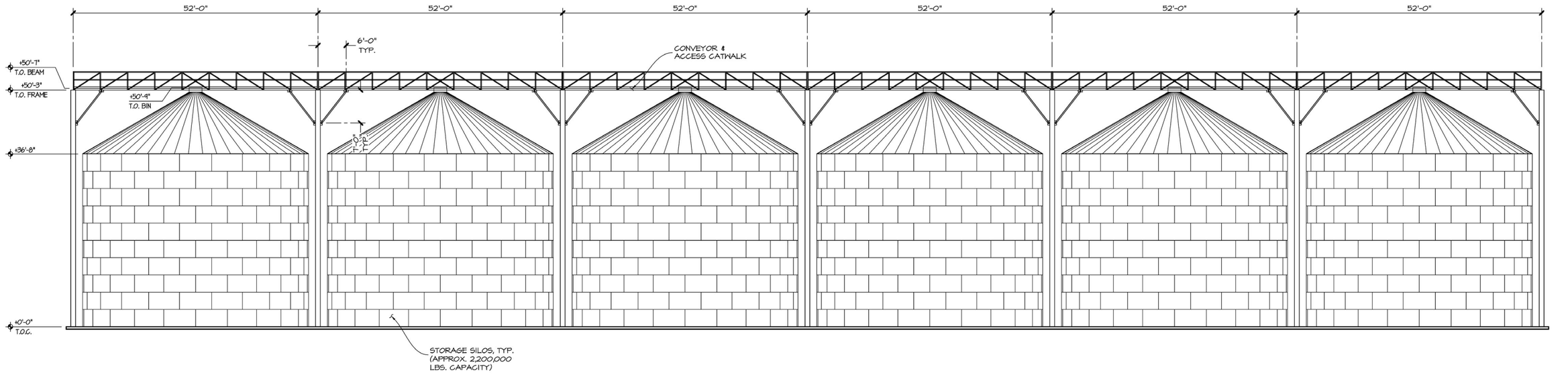


DRYER & CATWALK ELEVATION



EAST
SILO ELEVATION

LSA

FIGURE 3-6

NOT TO SCALE

S. Stamoules, Inc. Pistachio Processing Facility Project
Silos and Dryers Elevations

SOURCE: Engel & Company, 2020

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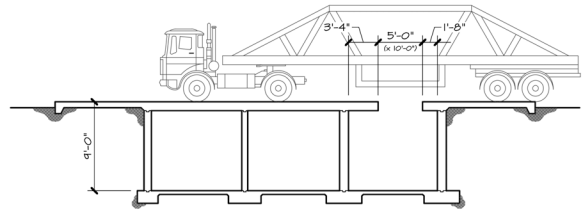
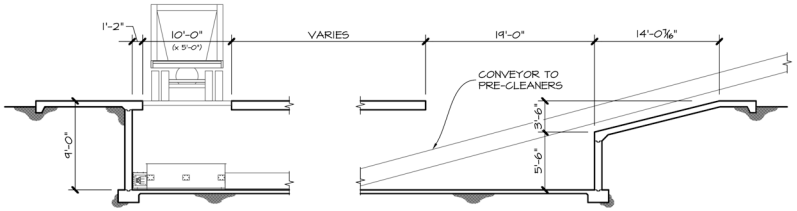
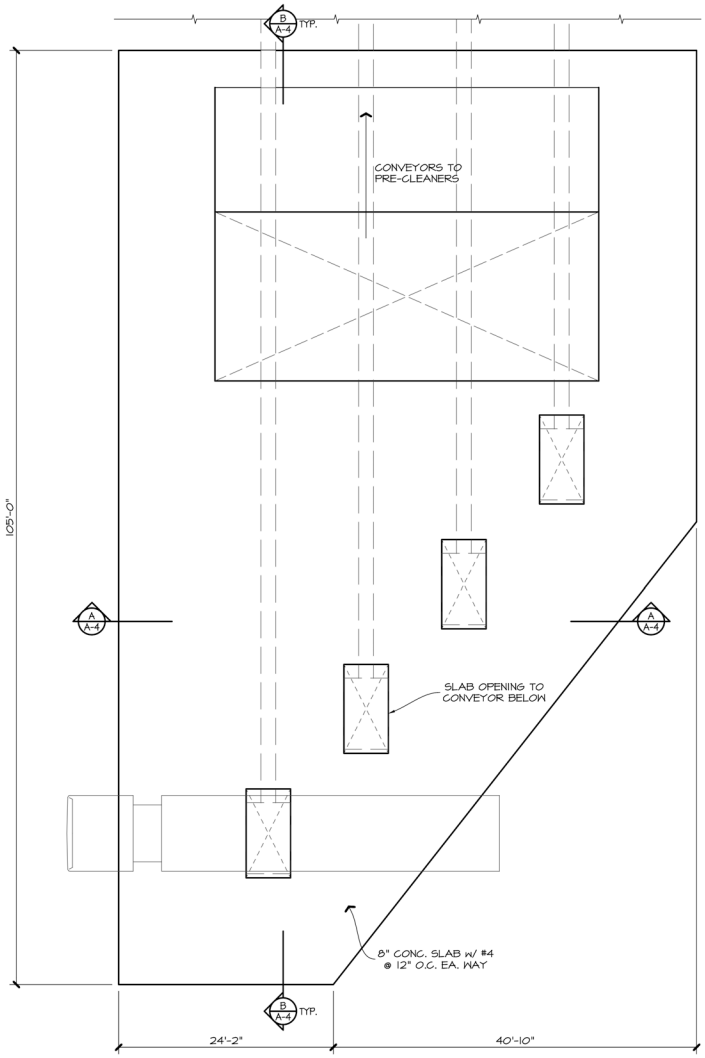


A DRIVE-OVER DUMP TRANSVERSE
DETAIL



B DRIVE-OVER DUMP LONGITUDINAL
DETAIL



DRIVE-OVER DUMP
PLAN

FIGURE 3-7

NOT TO SCALE

SOURCE: Engel & Company, 2020

S. Stamoules, Inc. Pistachio Processing Facility Project
Drive-Over Pit Site Plan

FREProjects:\CFF2201 OPA Pistachio\PRODUCTS\Project Description\Figures\Figure 3-7.ai (4/19/2022)

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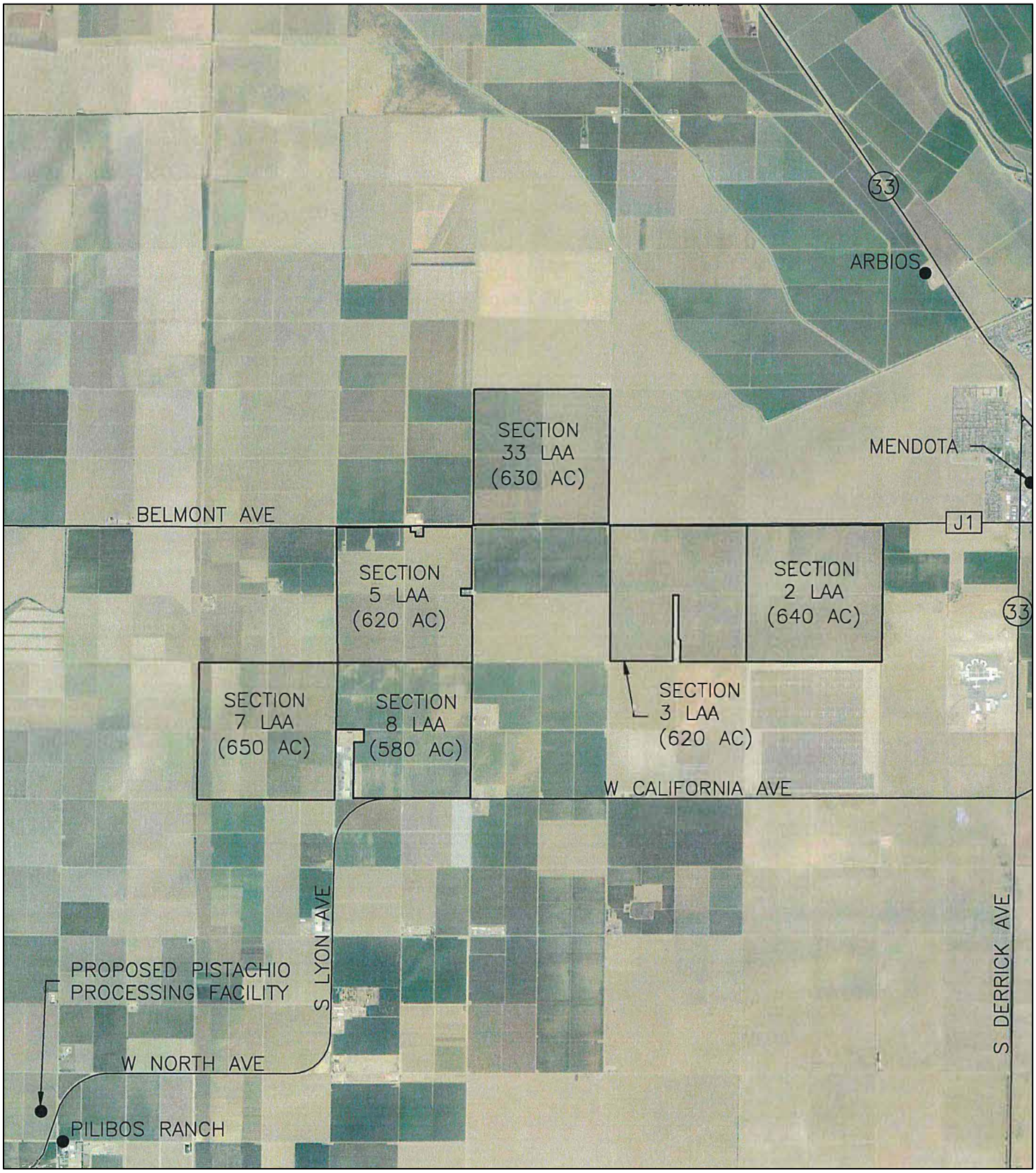

LSA

LEGEND

LAA - Land Application Area

AC - Acres

FIGURE 3-8

N

0 0.5 1

MILES

SOURCE: Valley Engineering

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S. Stamoules, Inc. Pistachio Processing Facility Project

Project Vicinity Map

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4.0 EVALUATION OF ENVIRONMENTAL IMPACTS

This chapter contains an analysis of each potentially significant environmental issue that has been identified for the S. Stamoules, Inc. Pistachio Processing Facility Project (proposed project). The following identifies how a determination of significance is made, identifies the environmental issues addressed in this chapter, describes the context for the evaluation of cumulative effects, lists the format of the topical issue section, and provides an evaluation of each potentially significant issue in Sections 4.1 through 4.14.

DETERMINATION OF SIGNIFICANCE

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

ISSUES ADDRESSED IN THE DRAFT EIR

The following 14 subsections of this chapter describe the environmental setting of the project as evaluated in this Environmental Impact Report (EIR) and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are also proposed to reduce potential impacts, where appropriate.

- 4.1 Aesthetics
- 4.2 Agriculture and Forestry Resources
- 4.3 Air Quality
- 4.4 Biological Resources
- 4.5 Cultural Resources and Tribal Cultural Resources
- 4.6 Energy
- 4.7 Geology and Soils
- 4.8 Greenhouse Gas Emissions
- 4.9 Hazards and Hazardous Materials
- 4.10 Hydrology and Water Quality
- 4.11 Land Use Planning
- 4.12 Noise
- 4.13 Transportation
- 4.14 Utilities and Service Systems

ENVIRONMENTAL SETTING

This chapter has been prepared in accordance with *State CEQA Guidelines* Section 15125, which states:

> An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. The environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the physical effects of the proposed project and its alternatives.

The Notice of Preparation (NOP) of an EIR for the proposed project was published on July 8, 2022. Thus, each of the environmental topical sections in this chapter includes a discussion of physical conditions in the vicinity of the project site on or around this date.

CUMULATIVE ANALYSIS CONTEXT

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

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

FORMAT OF ISSUE SECTIONS

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

- **Environmental Setting:** The Environmental Setting section for the environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the project site.

- **Regulatory Setting:** The Regulatory Setting section for the environmental topic provides a general overview of regulatory considerations that are applicable to each specific environmental topic.

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

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

AES Aesthetics
AG Agriculture and Forestry Resources
AIR Air Quality
BIO Biological Resources
CUL Cultural Resources and Tribal Cultural Resources
EN Energy
GEO Geology and Soils
GHG Greenhouse Gas Emissions
HAZ Hazards and Hazardous Materials
HYD Hydrology and Water Quality
LU Land Use and Planning
NOI Noise
TRA Transportation
UTL Utilities and Service Systems

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

ENVIRONMENTAL ISSUES

Sections 4.1 through 4.14 of this chapter describe the environmental setting of the project as it relates to each specific environmental topic evaluated in the EIR and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate.

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4.1 AESTHETICS

This section describes the existing visual and aesthetic resources of the project site and evaluates the potential for changes in aesthetic character that could result from implementation of the proposed project. This section also evaluates the potential loss of existing visual resources, effects on public views, visual compatibility with existing uses, and light and glare impacts. The analysis on this section is based on information from the County of Fresno General Plan Environmental Impact Report (EIR).[1]

4.1.1 Environmental Setting

This section provides a discussion of the existing visual and aesthetic resources in the project area.

4.1.1.1 Project Site and Surroundings

The project site is approximately 98 acres in size and is currently used for agriculture. The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile west of the project site. The project site is surrounded by active farmland. Pilibos Ranch is located southeast of the project site, across West Panoche Road. The Cardella Winery is located northwest of the project site and is publicly accessible by a driveway from West Panoche Road, southwest of the project site. Other agriculture-supporting buildings are also located in the vicinity of the project site.

4.1.1.2 Scenic Resources

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

Fresno County has a diverse visual landscape that gradually changes from east to west. Starting from the east are the Sierra Nevada Mountains, which are rich in coniferous forests and provide scenic views of the varied topography. There are several large reservoirs such as Millerton Lake, Huntington Lake, and Shaver Lake scattered throughout the Sierra Nevada Mountains that provide recreational as well as scenic opportunities. The San Joaquin and Kings Rivers, which originate high in the Sierra Nevada Mountains, are the two major rivers in Fresno County. The built environment in Fresno County is located throughout the valley, with much of it located along the Highway 99 corridor. Agricultural lands consisting of orchards, vineyards, ranches, and various row crops start on the fringe of these communities and extend to cover much of the valley floor. The Coastal Foothills, containing gentle rolling hills with scattered oak trees, extend westward past Interstate 5 (I-5). The

[1] County of Fresno. 2000. General Plan Update, Draft Environmental Impact Report, 4.16 Visual Quality. Website: https://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_EIR/EIR/Visual416.pdf (accessed May 2023).

project site is undeveloped and in agricultural use, and provides views of rural farmland. However, there are no trees, rock outcroppings, and/or historic buildings located on or near the project site that have been identified as important scenic resources.

4.1.1.3 Scenic Vistas

A scenic vista is a viewpoint that provides expansive views of highly valued landscape for the public's benefit. It is usually viewed from some distance away. Aesthetic components of a scenic vista include (1) scenic quality, (2) sensitivity level, and (3) view access. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors. Typical scenic vistas are locations where views of rivers, hillsides, and open space areas are accessible from public vantage points.

Fresno County contains diverse landscapes and vistas that could be considered scenic, particularly views of rural farmland, the coastal foothills extending westward past I-5, the Sierra Nevada's coniferous forests and reservoirs such as Millerton Lake, Huntington Lake, and Shaver Lake. The project site is currently used for agriculture and has views of adjacent rural farmland; however, the proposed project would continue agricultural operations on site and would introduce structures of similar scale and design as those found in adjacent agricultural operations. As such, the proposed project would not conflict with views of adjacent rural farmland.

4.1.1.4 Scenic Corridors

Scenic corridors are channels that facilitate movement (primarily by automobile, transit, bicycle, or foot) from one location to another with expansive views of natural landscapes that may also include visually attractive development. Scenic corridors analyzed under the California Environmental Quality Act (CEQA) typically include State-designated scenic highways or local corridors defined in applicable planning documents.

According to the California Department of Transportation (Caltrans) State Scenic Highway Mapping System[2], Fresno County has three eligible State Scenic Highways, including State Route 180 (SR-180), State Route 168 (SR-168), and State Route 198 (SR-198), and one officially designated scenic highway along SR-180. The project site is not in the vicinity of any eligible or officially designated scenic highways.

4.1.1.5 Visual Character and Quality

In general, concepts of visual character and quality can be organized around four basic elements: (1) site utilization, (2) buildings and structures, (3) landscaping, and (4) signage. Adverse visual quality effects can include the loss of aesthetic features or the introduction of contrasting features that could contribute to a decline in overall visual character. In addition, the degree of access to a

[2] California Department of Transportation (Caltrans). State Scenic Highways. Website: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed October 2023).

visual resource contributes to the value of that resource so that an adverse visual quality effect can also occur if access to a visual resource is restricted.

The project site is located in an agricultural area of Fresno County and is surrounded by orchards and row crops. Much of the project site's aesthetic value can be attributed to agriculture uses within and adjacent to the project site, which provide a sense of open space, emphasize the County's rural and farming heritage, and allow motorists opportunities for unrestricted panoramic views.

4.1.1.6 Light Sources and Glare

A light source is a device that produces illumination, including incandescent and light-emitting diode (LED) bulbs, fluorescent and neon tubes, halogen and other vapor lamps, and reflecting surfaces or refractors incorporated into a lighting fixture. Any translucent enclosure of a light source is considered to be part of the light source. Glare is defined as a continuous or periodic intense light that may cause eye discomfort or be temporarily blinding to humans. The project site is located in an agricultural area surrounded by crops, orchards and other agricultural operations. Existing lights are limited to lighting form adjacent agricultural operations. Undeveloped lands that are located within the project area are not characterized by significant sources of light and glare.

4.1.2 Regulatory Setting

4.1.2.1 Federal Regulations

No federal regulations pertaining to aesthetics are available for or applicable to the project.

4.1.2.2 State Regulations

Caltrans Scenic Highway Program. The Caltrans Scenic Highway Program protects the natural scenic beauty of the State's highways and corridors through designating scenic highways throughout the State. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Other considerations given to a scenic highway designation include how much of the natural landscape a traveler may see and the extent to which visual intrusions degrade the scenic corridor.

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

4.1.2.3 Local Regulations

County of Fresno Code of Ordinances. The County of Fresno (County) Code of Ordinances identifies land use categories, development standards, and other general provisions that ensure consistency between the County's General Plan and proposed development projects. The following provisions address aesthetics:

Title 8, Chapter 8.40 (Noise Control), Section 8.40.060 (Noise Source Exemptions): Noise sources associated with construction, provided such activities do not take place before six a.m. or after nine p.m. on any day except Saturday or Sunday, or before seven a.m. or after five p.m. on Saturday or Sunday.

Title 17, Chapter 17.48 (Design and Development Standards): Outlines design and improvement standards for roads, lots, easements, and waterways in the county to provide for adequate traffic circulation and extension of aesthetic values.

Title 17, Chapter 17.72, Part IV (Design Principles): Provides details to size and configuration of parcels upon division of land to maintain land use compatibility and to efficiently utilize adjacent parcels for future development.

Fresno County General Plan. The General Plan contains policies aimed at preserving scenic views and panoramas and designating and maintaining scenic roadways including highways, scenic drives, and landscaped drives. The following policies included in Table 4.1.A related to aesthetics would apply to the proposed project.

Table 4.1.A: Fresno County General Plan Policies Related to Aesthetics

Policy/Action Item No.	Policy
Open Space and Conservation Element	
Policy OS-K.1	The County shall encourage the preservation of outstanding scenic views, panoramas, and vistas wherever possible. Methods to achieve this could include encouraging private property owners to enter into open space easements for designated scenic areas.
Policy OS-K.4	The County should require development adjacent to scenic areas, vistas, and roadways to incorporate natural features of the site and be developed to minimize impacts to the scenic qualities of the site.

Source: General Plan (County of Fresno 2000).

In addition to the policies listed above, the Visual Quality section of the County of Fresno General Plan EIR evaluates aesthetic impacts associated with buildout of the General Plan, and includes the following mitigation measure that is applicable to the proposed project:

Mitigation Measure 4.16-2 In approving new development, the County shall require that lighting standards be designed and constructed to minimize the project contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive (e.g., residences, hospitals) properties.

4.1.3 Impacts and Mitigation Measures

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

significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed. A brief discussion about why a detailed analysis of potential impacts to forestry resources is not included in this section is also included below.

4.1.3.1 Significance Criteria

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

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

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

c. 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);or

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

4.1.3.2 Project Impacts

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

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is generally defined as a public vantage point with an expansive view of a significant landscape feature. An impact on scenic vistas is considered significant if it substantially diminishes, blocks, or impedes an expansive view of a significant landscape feature from a public vantage point. Fresno County contains diverse landscapes and vistas that could be considered scenic, particularly views of rural farmland, the coastal foothills extending westward past I-5, the Sierra Nevada's coniferous forests, and reservoirs such as Millerton Lake, Huntington Lake, and Shaver Lake.

The project site is currently undeveloped, used for agriculture, and surrounded by orchards and crops. The project site is bounded by West Panoche Road to the south and east, and by agricultural uses to the south, east, and west. The views of rural farmland within and adjacent to the project site could qualify as a potentially scenic vista under the General Plan.

The proposed project is located within the Exclusive Agricultural Zoning District (AE-20) of Fresno County. Implementation of the proposed project would introduce a pistachio processing facility onto the project site; however, the proposed project would be a value-added agricultural operation compliant with General Plan Policies LU-A.2 and LU-A.3, which allow the operation of value-added agricultural processing facilities in agriculturally-designated areas, and the County's Zoning

Ordinance for the AE-20 zoning district.[3] Additionally, the proposed project would introduce uses compatible with the agriculture-related structures and uses in the project vicinity and would not obstruct or have substantial adverse effects on views of rural farmland in Fresno County. Therefore, the proposed project would not have substantial adverse effects on scenic vistas, and the impact would be less than significant.

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

Level of Significance Without Mitigation: Less Than Significant

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

According to the California Scenic Highway Mapping System, there is one officially designated State Scenic Highway in Fresno County along SR-180, located approximately 12 miles northeast of the project site. Three eligible-for-designation State Scenic Highways are also present in Fresno County, with SR-168 being the closest one to the project site (i.e., located approximately 35 miles southeast from the project site). None of these are in the immediate vicinity of the project site. Since there are no eligible or officially designated State Scenic Highways within the immediate vicinity of the project site, the project would not impact a designated State Scenic Highway. Furthermore, the eligibility of the three State Scenic Highways, scenic resources located within the highway segments, or their viewshed would not be impacted by the proposed project. Therefore, no impact on scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway would occur as a result of the proposed project.

Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.

Level of Significance Without Mitigation: No Impact

c. Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point)?

The proposed project would consist of the construction of a pistachio hulling, processing, and packing facility on a 98-acre parcel of open farmland surrounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The proposed project would introduce industrial-agricultural structures into an undeveloped agricultural area, changing the existing visual character of the project site. However, the proposed project would be consistent with other agriculture-related buildings and structures throughout the project vicinity. Adjacent buildings used for storage of agriculture equipment are similar to the proposed structures associated with the proposed project.

[3] County of Fresno. 2018. Zoning Ordinance, Section 816: "AE" Exclusive Agricultural District. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/36254-816ae_6-18_final.pdf (accessed October 2023).

Additionally, the project site is zoned within the Exclusive Agricultural District (AE-20). This district is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related uses of the land that could be detrimental to the physical and economic well-being of the community. Uses permitted within the AE-20 District include the harvesting, curing, processing, packaging, shipping and selling of agricultural products, among other activities, subject to applicable limitations stated in Section 816 of the County zoning ordinance. As such, the proposed project would not require a change of the project site's current zoning and would be consistent with the County's General Plan and Zoning Ordinance. As such, the proposed project would not conflict with any applicable zoning or other regulations governing scenic quality. Therefore, this impact would be less than significant.

Impact AES-3: The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point).

Level of Significance Without Mitigation: Less Than Significant Impact

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

The proposed project would be implemented in four phases, each of which would introduce buildings and equipment onto the project site. The new buildings and structures would include two industrial-style huller buildings with insulated metal panel exterior walls, one industrial-style processing building with steel frames and insulated metal panel exterior walls, and 48 galvanized steel silos.

Construction of the proposed project could introduce temporary light and glare into the project site that could adversely affect daytime views. Although construction activities are anticipated to occur primarily during daylight hours, it is possible that some activities could occur during dusk or early evening hours. Title 8, Chapter 8.40 of the Fresno County Code of Ordinances sets permitted construction hours between 6:00 a.m. and 9:00 p.m. Monday through Friday and between 7:00 a.m. and 5:00 p.m. on Saturday and Sunday. Once construction of all phases of the proposed project is complete, light and glare from these activities would cease to occur.

Building materials used for construction of structures (i.e., reflective glass and polished surfaces) and new lights associated with the proposed project would potentially be the most substantial sources of light and glare in the project site. In compliance with Fresno County's ministerial permit process requirements for new development, the California Building Standards Code (Title 24) and Mitigation Measure 4.16-2 of the County General Plan EIR Visual Quality Section, all new buildings and structures associated with the proposed project would comply with applicable lighting standards designed and constructed to minimize the project's contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive properties. Additionally, in compliance with applicable State and local regulations, potentially reflective structures in the project site would be coated in grey primer to avoid glare impacts. As a result, the proposed project would have a less than significant impact related to a new source of substantial light or glare.

Impact AES-4: The project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Level of Significance Without Mitigation: Less Than Significant Impact

4.1.3.3 Cumulative Impacts

Implementation of the proposed project would contribute to the alteration of the visual character of the region anticipated from growth and development in the region (e.g., growth and development in Fresno County).

Implementation of the proposed project would introduce a pistachio hulling, processing, and packing facility in the project site. The structures to be constructed under the proposed project would be consistent with other agriculture-related buildings and structures throughout the project vicinity and would not contribute to a cumulative degradation of scenic vistas in Fresno County. The proposed project is also not in the vicinity of a designated State Scenic Highway and would not result in cumulative impacts to scenic resources along State Scenic Highways in Fresno County.

Compliance with the California Building Code (CBC), General Plan EIR Mitigation Measure 4.16-2, and the County's ministerial permitting process regulating light and glare would reduce cumulative impacts on scenic resources through the adoption and enforcement of development design standards to reduce light and glare from the project. Therefore, cumulative aesthetic impacts would be considered less than significant.

Impact AES-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to aesthetics.

Level of Significance Without Mitigation: Less Than Significant Impact

4.2 AGRICULTURE AND FORESTRY RESOURCES

The analysis in this section is based on information from Chapter 3.0, Project Description, of this Environmental Impact Report (EIR) and the Agriculture section of the County of Fresno General Plan EIR.[1]

4.2.1 Environmental Setting

4.2.1.1 Project Area

The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site. Pilibos Ranch is located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project site and is publicly accessible by a driveway from West Panoche Road, southwest of the project site. Other agriculture-supporting buildings are located in the vicinity of the project site.

Agriculture Resources. The project site is approximately 98 acres in size and is currently being used for agriculture. The project site is in Assessor's Parcel Number (APN) 019-150-64S, which is currently under a Williamson Act contract. Agriculture crops that have been historically grown on the project site include pistachio, tomatoes, oats, barley, and cotton.[2] The project site is currently used to grow cantaloupe.

Forestry Resources. The project site is surrounded by active farmland and agricultural operations and is zoned within the Exclusive Agricultural District (AE-20) of Fresno County. The project site does not contain or is located adjacent to forest land, timberland or is zoned for, or located adjacent to parcels that are zoned for, Timberland Production.

4.2.2 Regulatory Setting

The applicable federal, State, regional, and local regulatory framework is discussed below.

4.2.2.1 Federal Regulations

No federal regulations pertaining to agriculture or forestry are available for or applicable to the project.

1 Fresno County. 2000. General Plan Update. Draft Environmental Impact Report. Agriculture. Website: https://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_EIR/EIR/Ag4-3.pdf (accessed May 2023).

2 United States Department of Agriculture (USDA). National Agriculture Statistics Service (NRSS). 2021. CropScape-Cropland Data Layer. Website: https://nassgeodata.gmu.edu/CropScape/ (accessed April 2023).

4.2.2.2 State Regulations

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

The DOC FMMP produces maps and statistical data used for analyzing impacts on agricultural resources. Agricultural land is categorized according to soil quality and irrigation status. The maps are updated every 2 years through review of aerial photographs, a computer mapping system, public review, and field reconnaissance. The latest countywide data available are for the period from 2014 to 2016. The FMMP categories are defined as follows:

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

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

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

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

- **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.

- **Urban and Built Up Land:** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other

transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **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 or 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.

California Land Conservation (Williamson) Act. The California Land Conservation Act, better known as the Williamson Act, has been the State's most important agricultural land protection program since its enactment in 1965. Fundamentally, the Williamson Act is a State policy administered by local governments. Local governments are not mandated to administer the Act, but those that do have some latitude to tailor the program to suit local goals and objectives.

Williamson Act contracts have a minimum term of 10 years, with renewal occurring automatically each year (local governments can establish initial contract terms for longer periods of time). The contracts run with the land and are binding on all successors in interest of the landowner. Only land located within an agricultural preserve is eligible for Williamson Act contracts. An agricultural preserve defines the boundary of an area within which a city or county would enter into contracts with landowners. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural uses would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit.

California Environmental Quality Act (CEQA). CEQA was adopted in 1970 by the California State Legislature to identify, protect, and minimize impacts to the State's environmental resources, and codified as Section 21000 of the State's Public Resources Code (PRC). CEQA vests the primary responsibility of carrying out its objectives to local municipalities. In determining whether a proposed project may have a significant effect on agricultural resources, the Fresno County uses the thresholds provided in Appendix G of the *State CEQA Guidelines*.

PRC 21095 – California Agricultural Land Evaluation and Site Assessment Model. Land Evaluation and Site Assessment (LESA) is a term used to define an approach for rating the relative quality of agricultural land based upon specific measurable features.

The formulation of a California LESA Model is the result of Senate Bill (SB) 850 (Chapter 812/1993), which charges the Resource Agency (in consultation with the Governor's Office of Planning and Research [OPR]) with developing an amendment to Appendix G of the *State CEQA Guidelines* concerning agricultural lands. Such an amendment is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process" (PRC Section 21095).

A LESA analysis is based on the following definition of agricultural land contained in CEQA, PRC Section 21060.1:

> **21060.1 (a)** "Agricultural land" means prime farmland, farmland of statewide importance, or unique farmlands, as defined by the United States Department of Agriculture land inventory and monitoring criteria as modified for California.
>
> **21060.1 (b)** In those areas of the state where lands have not been surveyed for the classifications specific in subdivision (a), "agricultural land" means land that meets the requirement of "prime agricultural land" as defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code [the Williamson Act].

PRC 12220 (g) – Forest Land. "Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

PRC 4526 – Timberland. "Timberland" means land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection (Board) as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the Board on a district basis.

PRC 51104 (g) – Timberland Production Zone. "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

California Civil Code 3482.5 – "Right-to-Farm" Law. No agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than 3 years if it was not a nuisance at the time it began.

4.2.2.3 Local Regulations

County of Fresno General Plan. The General Plan contains the policies to support the goal of long-term preservation and protection of agricultural resources in Fresno County. Table 4.2.A shows General Plan policies related to agriculture applicable to the proposed project.

4.2.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to agriculture and forestry resources that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant.

Table 4.2.A: Fresno County General Plan Policies Related to Agricultural and Forestry Resources

Policy/Action Item No.	Policy/Action Item
Land Use Element	
Policy LU-A.1	The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.
Policy LU-A.2	The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the on-site agricultural operation. Uses listed in Table LU-3 are illustrative of the range of uses allowed in areas designated Agriculture
Policy LU-A.3	The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses listed in Table LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria: a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics; b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity; c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (1/4) mile radius; d. A probable workforce should be located nearby or be readily available; e. For proposed agricultural commercial center uses the following additional criteria shall apply: 1. Commercial uses should be clustered in centers instead of single uses. 2. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four (4) miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community. 3. New commercial uses should be located within or adjacent to existing centers. 4. Sites should be located on a major road serving the surrounding area. 5. Commercial centers should not encompass more than one-quarter (1/4) mile of road frontage, or one-eighth (1/8) mile if both sides of the road are involved, and should not provide potential for developments exceeding ten (10) separate business activities, exclusive of caretakers' residences; f. For proposed value-added agricultural processing facilities, the evaluation under criteria "a" above, shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services; and g. For proposed churches and schools, the evaluation under criteria LU-A.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community. h. When approving a discretionary permit for an existing commercial use, the criteria listed above shall apply except for LU-A.3b, e2, e4, and e5.
Economic Development Element	
Policy ED-A.20	The County shall support accelerated development of high-value-added food processing firms.

Source: General Plan (County of Fresno 2000).

The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.2.3.1 Significance Criteria

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

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;

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

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

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

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

4.2.3.2 Project Impacts

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

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The project site is approximately 98 acres in size, located within a 316.2-acre parcel currently being used for agricultural operations. The project site is zoned within the Exclusive Agricultural District (AE-20) of Fresno County and is classified as "Prime Farmland" by the DOC's FMMP.[3] The proposed project would construct a pistachio processing facility in the project site. Although the project site would stop being used for agricultural crop production, the proposed project would introduce a value-added agricultural facility into the project site, which is a permitted use for land zoned within the County's Exclusive Agricultural Zoning District (AE-20) subject to the approval of a Conditional

[3] California Department of Conservation (DOC). 2018. Farmland Mapping and Monitoring Program, Fresno County. Website: https://gis.conservation.ca.gov/portal/home/group.html?id=b1494c705cb34d01acf78f4927a75b8f#overview (accessed May 2023).

Use Permit,[4] and is compliant with General Plan Policies LU-A.2 and LU-A.3, which allow the operation of value-added agricultural processing facilities in agricultural-designated areas. As such, the project would not convert Important Farmland to a non-agricultural use. Therefore, the impact would be less than significant.

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

Level of Significance Without Mitigation: Less Than Significant, No Mitigation Required

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed project is located within the Exclusive Agricultural Zoning District (AE-20) of Fresno County. This district is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related uses of the land that could be detrimental to the physical and economic well-being of the community. The project site is in APN 019-150-64S, which is currently under a Williamson Act contract.

The proposed project would build a pistachio hulling, processing, and packing facility in the 98-acre project site that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Uses permitted within the AE-20 District include the harvesting, curing, processing, packaging, shipping, and selling of agricultural products, among other activities, subject to approval of a Conditional Use Permit and applicable limitations stated in Section 816 of the County Zoning Ordinance.[5]

The proposed project would introduce a pistachio hulling, processing, and packing agricultural facility into the project site, and Fresno County has determined that the non-renewal of the Williamson Act contract at APN 019-150-64S for the 98-acre area occupied by the proposed facility would be required.

As such, Mitigation Measure AG-2 would be implemented to ensure compliance with the required procedure for non-renewal of a portion of the Williamson Act contract at APN 019-150-64S. With implementation of Mitigation Measure AG-2, by the time project development begins at the project site, contract non-renewal would be in process and within 10 years there would be no parcels within the project site under a Williamson Act contract. Therefore, the proposed project would not conflict with zoning for agriculture or a Williamson Act contract, and the impact would be less than significant with mitigation.

4 County of Fresno. 2018. Zoning Ordinance, Section 816: "AE" Exclusive Agricultural District. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/36254-816ae_6-18_final.pdf (accessed October 2023).

5 Ibid.

Impact AG-2: The project would conflict with existing zoning for agricultural use or a Williamson Act contract.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure AG-2 Prior to issuance of building permits, the Project Applicant shall submit for non-renewal of the Williamson Act contract at the 98-acre portion of Accessor's Parcel Number (APN) 019-150-64S associated with proposed project facilities.

Level of Significance With Mitigation: Less Than Significant

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The project site is zoned within the County's Exclusive Agricultural Zoning District (AE-20). The project site does not contain or is located adjacent to forest land or timberland. Additionally, the project is not zoned timberland, or is located adjacent to zoning for Timberland Production. As a result, the project would not conflict with existing zoning for, or cause rezoning of forestland, timberland, or timberland zoned Timberland Production, and no impact would occur.

Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

Level of Significance Without Mitigation: No Impact, No Mitigation Required

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

As described above in response to Section c, the project site does not contain any forest land, is not located adjacent to forestland, timberland, or land zoned for Timberland Production, nor would the proposed project result in the conversion of forest land to non-forest use. As result, no impact would occur.

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

Level of Significance Without Mitigation: No impact, No Mitigation Required

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

The project site is located in an agricultural area of Fresno County and is surrounded by orchards, row crops, and other agricultural operations. The proposed project would build a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's

surrounding pistachio orchards. Although the project site would stop being used for agricultural crop production after the proposed project is implemented, the proposed project would introduce a value-added agricultural facility into the project site, which is a permitted use for land zoned within the County of Fresno's (County's) AE-20 District subject to approval of a Conditional Use Permit. Additionally, the proposed use for the project site would be operated in conjunction with agricultural operations in the Project Applicant's surrounding pistachio orchards, and would support the long-term operation of these agricultural uses for crop production. The proposed use for the project site would be similar to existing value-added agricultural operations in the vicinity being used now by the Project Applicant and, as such, the proposed project would not introduce an incompatible use that would drive the conversion of an agricultural use to a non-agricultural use. Therefore, impacts associated with changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural uses would be less than significant.

Impact AG-5: The project would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Level of Significance Without Mitigation: Less Than Significant, No Mitigation Required

4.2.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if, in combination with other projects, it would contribute to a significant cumulative impact related to agriculture and forestry. The cumulative impact area is Fresno County.

The proposed project would introduce a pistachio processing facility on the project site that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Although the proposed project would develop the site, and the project site would no longer be used for agricultural crop production, implementation of the proposed project would include a value-added agricultural facility that would be consistent with General Plan Land Use and Economic Development policies included in Table 4.2.A, and is permitted in the County's AE-20 District subject to approval of a Conditional Use Permit. Furthermore, compliance with Mitigation Measure AG-2 would ensure the completion of the required procedure for non-renewal of the Williamson Act contract at APN 019-150-64S prior to issuance of building permits, thereby ensuring that project development does not conflict with a Williamson Act contract. Additionally, the proposed project would support the continued operation of agricultural crop production in the vicinity of the site and would be compatible with adjacent agricultural operations. As such, the proposed project would not result in the conversion of agricultural uses to nonagricultural uses and would not contribute to a cumulative loss of agricultural land in Fresno County. The cumulative impact would be less than significant with mitigation.

Additionally, the project site does not include any forestlands or land that contains timber resources, is not zoned as forestland or for timberland production, and is not located adjacent to forestland or timberland. As a result, implementation of the proposed project would not contribute to cumulative impacts to forestry resources. The cumulative impact would be less than significant.

Impact AG-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to agricultural resources.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measure AG-2 above.

Level of Significance With Mitigation: Less Than Significant

4.3 AIR QUALITY

This section has been prepared using the methodologies and assumptions contained in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). This section describes existing air quality and the regulatory framework for air quality. The section also describes the potential air quality effects of the proposed project, including the effects of construction and operational traffic on regional pollutant levels and health risks.

4.3.1 Environmental Setting

The following discussion provides an overview of existing air quality conditions in the region and in Fresno County. Ambient air quality standards and the regulatory framework are summarized and climate, air quality conditions, and typical air pollutant types and sources are also described.

4.3.1.1 Project Area

The project site is in unincorporated Fresno County, 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 Basin is the San Joaquin Valley Air Pollution Control District (SJVAPCD). Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season.

4.3.1.2 Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the County are O_3, CO, and suspended particulate matter. Significance thresholds established by an air quality district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and reactive organic gases (ROG).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air quality districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

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

Ozone. Ozone (O_3) is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NOX. The main sources of ROG and NOx, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. Automobiles are typically the largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited – it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

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

Pollutants	Sources	Primary Effects
Ozone (O_3)	● Precursor sources:[1] motor vehicles, industrial emissions, and consumer products.	● Respiratory symptoms. ● Worsening of lung disease leading to premature death. ● Damage to lung tissue. ● Crop, forest, and ecosystem damage. ● Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Diameter ($PM_{2.5}$)	● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction.	● Premature death. ● Hospitalization for worsening of cardiovascular disease. ● Hospitalization for respiratory disease. ● Asthma-related emergency room visits. ● Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Diameter (PM_{10})	● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction.	● Premature death and hospitalization, primarily for worsening of respiratory disease. ● Reduced visibility and material soiling.
Nitrogen Oxides (NO_X)	● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	● Lung irritation. ● Enhanced allergic responses.
Carbon Monoxide (CO)	● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	● Chest pain in patients with heart disease. ● Headache. ● Light-headedness. ● Reduced mental alertness.
Sulfur Oxides (SO_X)	● Combustion of sulfur-containing fossil fuels. ● Smelting of sulfur-bearing metal ores. ● Industrial processes.	● Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	● Contaminated soil.	● Impaired mental functioning in children. ● Learning disabilities in children. ● Brain and kidney damage.
Toxic Air Contaminants (TACs)	● Cars and trucks (especially diesels). ● Industrial sources, such as chrome platers. ● Neighborhood businesses, such as dry cleaners and service stations. ● Building materials and products.	● Cancer. ● Reproductive and developmental effects. ● Neurological effects.

Source: California Air Resources Board (2018).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from human-made and natural sources. Particulate matter is categorized in two size ranges: PM_{10}, for particles less than 10 microns in diameter, and $PM_{2.5}$, for particles less than 2.5 microns in diameter. Motor vehicles are the primary generators of particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to

be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[1] Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease, asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (EPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of EPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs do not have ambient air quality standards, but are regulated by the EPA, CARB, and the

[1] California Air Resources Board (CARB). 2020. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed October 2023).

SJVAPCD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[2] High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.[3] The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions.

High Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

Valley Fever. Valley fever is a fungal infection caused by coccidioides organisms. It can cause fever, chest pain and coughing, among other signs and symptoms. The coccidioides species of fungi that cause valley fever are commonly found in the soil in certain areas. These fungi can be stirred into the air by anything that disrupts the soil, such as farming, construction and wind. The fungi can then be breathed into the lungs and cause valley fever, also known as acute coccidioidomycosis. A mild case of valley fever usually goes away on its own. In more severe cases of valley fever, doctors

[2] California Air Resources Board (CARB). 2000. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. October. Website: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed October 2023).

[3] California Air Resources Board (CARB). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October. Prepared by the Stationary Source Division and Mobile Source Control Division. Website: www.arb.ca.gov/diesel/documents/rrpFinal.pdf (accessed October 2023).

prescribe antifungal medications that can treat the underlying infection. Valley Fever is not contagious and therefore does not spread from person to person. Most cases (approximately 60 percent) have no symptoms or only very mild flu-like symptoms and do not see a doctor. When symptoms are present, the most common are fatigue, cough, fever, profuse sweating at night, loss of appetite, chest pain, generalized muscle and joint aches particularly of the ankles and knees. There may also be a rash that resembles measles or hives but develops more often as tender red bumps on the shins or forearms.

4.3.1.3 National and State Ambient Air Quality Standards

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

Both the EPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.[4] State and federal standards for the criteria air pollutants are listed in Table 4.3.B.

4.3.1.4 Existing Climate and Air Quality

The following provides a discussion of the regional air quality and climate in Fresno County.

Regional and Local Air Quality. Air quality is a function of both local climate and local sources of air pollution. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.

[4] United States Environmental Protection Agency (EPA). 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed October 2023).

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

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[i]	Same as Primary Standard	
	Rolling 3-Month Average [i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[11]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Visibility-Reducing Particles [12]	8-Hour	See footnote [14]	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [10]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

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

Table notes continued on the following page

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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

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

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

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

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

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

[10] To attain the 1-hour national standard, the three-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14] In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
EPA = United States Environmental Protection Agency

The project site is located within the SJVAB and is under the jurisdiction of the SJVAPCD. A region's topographic features have a direct correlation with air pollution flow and therefore are used to determine the boundary of air basins. The SJVAB is comprised of approximately 25,000 square miles and covers of eight counties including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare, and the western portion of Kern. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The valley is basically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. An aerial view of the SJVAB would simulate a "bowl" opening only to the north. These topographic features restrict air movement through and out of the basin.

Although marine air generally flows into the basin from the San Joaquin River Delta, the Coast Range hinders wind access into the SJVAB from the west, the Tehachapi Mountains prevent southerly passage of air flow, and the high Sierra Nevada range is a significant barrier to the east. These topographic features result in weak air flow which becomes blocked vertically by high barometric pressure over the SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet).

Local climatological effects, including wind speed and direction, temperature, inversion layers, precipitation and fog, can exacerbate the air quality in the SJVAB. Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing vertically and by transporting it to other locations. For example, in the summer, wind usually originates at the north end of the SJVAB and flows in a south-southeasterly direction through the SJVAB, through Tehachapi pass, into the Southeast Desert Air Basin. In the winter, wind direction is reversed and flows in a north-northwesterly direction. In addition to the seasonal wind flow, a sea breeze flows into SJVAB during the day and a land breeze flowing out of the SJVAB at night. The diversified wind flow enhances the pollutant transport capability within SJVAB.

The annual average temperature varies throughout the SJVAB, ranging from the low 40s to high 90s, measured in degrees Fahrenheit (°F). With a more pronounced valley influence, inland areas show more variability in annual minimum and maximum temperatures than coastal areas. The majority of annual rainfall in the SJVAB occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in desert regions and slightly heavier showers near the lower portion of the Basin and along the Sierra Nevada mountains to the east.

The vertical dispersion of air pollutants in the SJVAB is limited by the presence of persistent temperature inversions. Because of cooling of the atmosphere, air temperature usually decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Inversions can exist at the surface, or at any height above the ground. The height of the base of the inversion is known as the "mixing height." This is the level within which pollutants can mix vertically. Air above and below the inversion base does not mix because of the differences in air density. Semi-permanent systems of high barometric pressure fronts frequently

establish themselves over the SJVAB, preventing low pressure systems that might otherwise bring rain and winds that clean the air.

Inversion layers are significant in determining ozone formation, and CO and PM_{10} concentrations. Ozone and its precursors will mix and react to produce higher ozone concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as carbon monoxide. PM_{10} is both directly emitted and created in the atmosphere as a chemical reaction. Concentration levels of pollutants are directly related to inversion layers due to the limitation of mixing space.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, where heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground level air to float up through the inversion layer.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. Periods of low inversions and low wind speeds are conditions favorable to high concentrations of CO and PM_{10}. In the winter, the greatest pollution problems are CO and NO_x because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

Attainment Status. The EPA and the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified."

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. The current attainment designations for the basin are shown in Table 4.3.C.

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

Pollutant	State	Federal
Ozone (1-hour)	Severe/Nonattainment	Not Applicable
Ozone (8-hour)	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard

Source: California Air Resources Board and EPA (2023).

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and maintained by the local air pollution control district and state air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the EPA to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). Attainment areas are required to maintain their status through moderate, yet effective air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of attainment such as marginal, moderate, serious, severe, and extreme are used to classify each air basin in the state on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data.

The SJVAPCD, together with CARB, maintains ambient air quality monitoring stations in the SJVAB. The air quality monitoring stations closest to the project site are the station at 32650 West Adams Avenue at Tranquility, 908 N. Villa Avenue at Clovis, and 3727 N. First Street at Fresno, California,

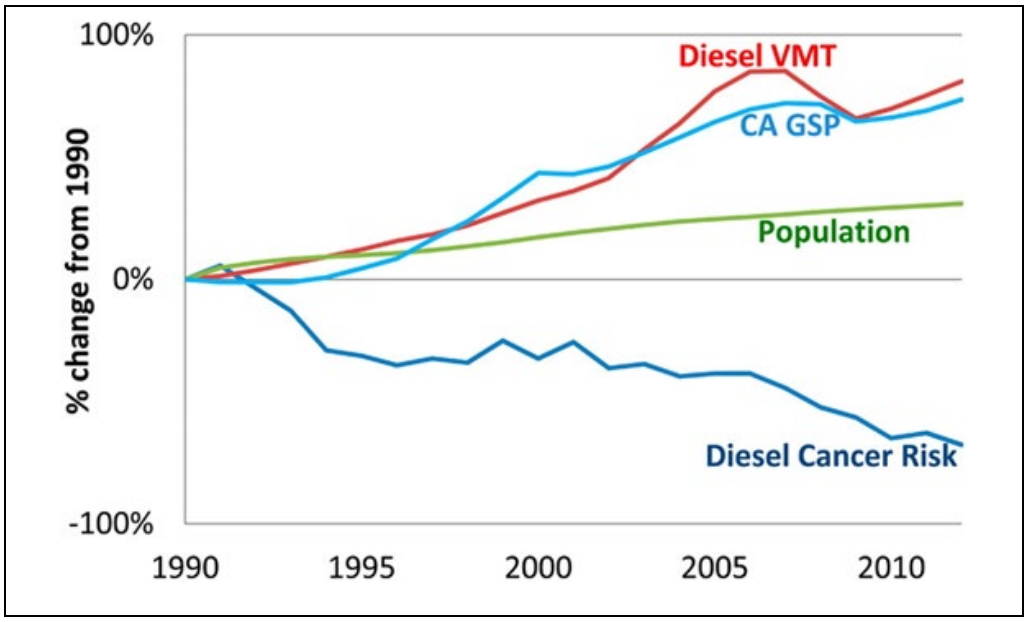
Pollutant monitoring results for years 2020 to 2022 at the Tranquility, Clovis, and Fresno monitoring stations, shown in Table 4.3.D, indicate that air quality in the vicinity of the project site has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was exceeded once in 2020 only. The State PM_{10} standard was exceeded 114 times in 2020, 111 times in 2021, and 73 times in 2022. Similarly, the federal $PM_{2.5}$ standard had 21 exceedances in 2020, 7 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards was not exceeded during the three-year period. The State 8-hour ozone standards were exceeded 2 times in 2020, 2 times in 2021, and no times in 2022. The federal 8-hour standards were exceeded 3 times in 2021, 5 times in 2021, and no times in 2022. The CO, SO_2, and NO_2 standards were not exceeded in this area during the 3-year period.

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

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)[1]				
Maximum 1-hour concentration (ppm)		2.9	1.3	1.3
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		2.6	1.2	1.1
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)[2]				
Maximum 1-hour concentration (ppm)		0.087	0.088	0.074
Number of days exceeded:	State: > 0.09 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.079	0.080	0.066
Number of days exceeded:	State: > 0.07 ppm	2	2	0
	Federal: > 0.07 ppm	3	5	0
Coarse Particulates (PM_{10})[1]				
Maximum 24-hour concentration (µg/m^3)		180.9	125.0	127.0
Number of days exceeded:	State: > 50 µg/m^3	114	111	73
	Federal: > 150 µg/m^3	1	0	0
Annual arithmetic average concentration (µg/m^3)		45.8	37.6	35.5
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)[2]				
Maximum 24-hour concentration (µg/m^3)		146.2	65.3	33.1
Number of days exceeded:	Federal: > 35 µg/m^3	21	7	0
Annual arithmetic average concentration (µg/m^3)		11.6	9.0	ND
Exceeded for the year:	State: > 12 µg/m^3	No	No	ND
	Federal: > 15 µg/m^3	No	No	ND
Nitrogen Dioxide (NO_2)[1]				
Maximum 1-hour concentration (ppm)		0.054	0.049	0.052
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.009	0.007	0.008
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)[3]				
Maximum 1-hour concentration (ppm)		0.0162	0.0075	0.0034
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.0022	0.0027	0.0012
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.00046	0.00043	0.00034
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Sources: CARB (2023) and EPA (2023).
[1] Data taken from the Clovis Monitoring Station at 908 N. Villa Avenue.
[2] Data taken form the Tranquility Monitoring Station at 32650 West Adams Avenue
[3] Data taken from the Fresno Monitoring Station at 3727 N. First Street.
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
EPA = United States Environmental Protection Agency

Toxic Air Contaminant Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.[5] Concentrations of diesel particulate matter, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown on Figure 4.3-1, below. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.



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

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

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

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulations

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

[5] Propper, Ralph, Patrick Wong, Son Bui, Jeff Austin, William Vance, Álvaro Alvarado, Bart Croes, and Dongmin Luo. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology*. Website: pubs.acs.org/doi/full/10.1021/acs.est.5b02766 (accessed October 2023).

The FCAA required the EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The EPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness, and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the EPA on suspected hazardous pollutants prior to regulatory development.

4.3.2.2 State Regulations

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

California Clean Air Act. In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain California ambient air quality standards (CAAQS) for carbon monoxide, ozone, sulfur dioxide and nitrogen dioxide by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

Legal authority for California to regulate sources of air pollution is found in federal and State law. The CARB is charged with coordinating regional and local efforts to attain and maintain State and nation air quality standards. The CARB has been given authority to regulate many sources that would normally be pre-empted by federal regulations through the issuance of waivers.

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

Low-Emission Vehicle Program. The CARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, CARB adopted the LEV III amendments to California's Low- Emission Vehicle (LEV) regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.

On-Road Heavy-Duty Vehicle Program. The CARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures.6 CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.

In addition, the CARB's Truck and Bus regulation was established to meet federal attainment standards. This regulation requires heavy-duty diesel vehicles that operate in California to reduce TAC emissions from their exhaust. Diesel exhaust is responsible for 70 percent of the cancer risk from airborne toxics. Therefore, by January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines to reduce PM and NO_x emissions. To help ensure that the benefits of this regulation are achieved, starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles (DMV).[7]

Air Quality Land Use Handbook. The CARB has developed an Air Quality and Land Use Handbook[8] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners and large gasoline service

6 California Air Resources Board (CARB). 2019. *On-Road Heavy-Duty Vehicle Program*. Last reviewed July 2. Website: ww3.arb.ca.gov/msprog/onroadhd/onroadhd.htm (accessed October 2023).

7 California Air Resources Board (CARB). 2019. *Truck and Bus Regulation.* Website: ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation (accessed October 2023).

8 California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site specific meteorology, freeway truck percentages or other factors that influence risk for a particular project site. The purpose of the land use compatibility analysis is to further examine the project site for actual health risk associated with the location of new housing on the project site.

Recommendations on siting new sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities are provided in Table 4.3.E.

4.3.2.3 Local Regulations

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

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

The SJVAPCD's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary means of reducing indirect emissions such as those from land use development projects. The approved General Plan is the primary long range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities

Table 4.3.E: Recommendations on Siting New Sensitive Land Uses Near Toxic Air Contaminant Sources

Source Category	Advisory Recommendation
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
	Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district.
	Do not site new sensitive land uses in the same building with Perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Source: CARB (2006).
Note: These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions. This was completed for Fresno County with the adoption of the Fresno County General Plan Policy Document, General Plan Update adopted October 3, 2020, which includes an air quality policy section.

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

Current Air Quality Plans. The SJVAPCD is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. The SJVAPCD does not have one single AQMP for criteria pollutants, rather the SJVAPCD addresses each criteria pollutant with its own Plan. The SJVAPCD has the following AQMPs:

- 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards
- 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ standard
- 2016 Plan for the 2008 8-Hour Ozone Standard
- 2013 Plan for the Revoked 1-Hour Ozone Standard
- 2007 PM10 Maintenance Plan
- 2004 Revision to the California State Implementation Plan for Carbon Monoxide

The SJVAPCD's AQMPs incorporate the latest scientific and technological information and planning assumptions, including updated emission inventory methodologies for various source categories. The SJVAPCD's AQMPs included the integrated strategies and measures needed to meet the national ambient air quality standards (NAAQS), implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards.

The SJVAPCD's current air quality plans are discussed blow.

Ozone Plans. The SJVAPCD's Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The comprehensive strategy in this plan will reduce NOx emissions by over 60 percent between 2012 and 2031, and will bring the San Joaquin Valley into attainment of EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031.

Particulate Matter Plans. The SJVAPCD adopted the 2007 PM10 Maintenance Plan in September 2007 to assure the SJVAB's continued attainment of the EPA's PM10 standard. The EPA designated the valley as an attainment/maintenance area for PM10.

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

The SJVAPCD prepared the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's most recent 24-hour $PM_{2.5}$ standard of 35 µg/m³. The CARB approved the SJVAPCD's 2012 $PM_{2.5}$ Plan at a public hearing on January 24, 2013. The plan, approved by the SJVAPCD Governing Board on December 20, 2012, will bring the Valley into attainment of EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than, December 31, 2020.

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

Rules and Regulations.

- **Rule 2280—Portable Equipment Registration.** Portable equipment used at project sites for less than six consecutive months must be registered with the SJVAPCD. The SJVAPCD will issue the registrations 30 days after receipt of the application.

- **Rule 2303 – Mobile Source Emission Reduction Credits.** A project may qualify for SJVAPCD vehicle emission reduction credits if it meets the specific requirements of Rule 2303 for any of the following categories:

    - Low-Emission Transit Buses
    - Zero-Emission Vehicles
    - Retrofit Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles
    - Retrofit Heavy-Duty Vehicles

- **Rule 4102 – Nuisance.** The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

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

- **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. The paving operations for new development and existing paved surfaces will be subject to Rule 4641.

- **Rule 8011—General Requirements: Fugitive Dust Emission Sources**. Fugitive dust regulations are applicable to outdoor fugitive dust sources. Operations, including construction operations, must control fugitive dust emissions in accordance with SJVAPCD Regulation VIII. According to Rule 8011, the SJVAPCD requires the implementation of control measures for fugitive dust emission sources. For projects in which construction-related activities would disturb equal to or greater than 1 acre of surface area, the SJVAPCD recommends that demonstration of receipt of an SJVAPCD-approved Dust Control Plan or Construction Notification Form, before issuance of the first grading permit, be made a condition of approval.

- **Regulation VIII – Fugitive PM_{10} Prohibitions.** Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

- **Rule 9410 – Employer Based Trip Reduction.** The purpose of this rule is to reduce vehicle miles traveled (VMT) from private vehicles used by employees to commute to and from their worksites in order to reduce emissions of NO_x, VOC and PM. The rule requires larger employers (those with 100 or more eligible employees) to establish employee trip reduction programs to reduce VMT, reducing emissions associated with work commutes. The rule uses a menu-based Employer Trip Reduction Implementation Plan and periodic reporting requirements to evaluate performance on a phased-in compliance schedule.

- **Rule 9510 – Indirect Source Review.** This rule reduces the impact of NO_x and PM_{10} emissions from new development projects. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through onsite mitigation, offsite SJVAPCD-administered projects, or a combination of the two. Compliance with SJVAPCD Rule 9510 reduces emissions impacts through incorporation of onsite measures as well as payment of an offsite fee that funds emission reduction projects in the Air Basin. The emissions analysis for Rule 9510 is detailed and is dependent on the exact project design that is expected to be constructed or installed. Compliance with Rule 9510 is separate from the CEQA process, though the control measures used to comply with Rule 9510 may be used to mitigate significant air quality impacts.

  Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration could also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD.

  Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. The SJVAPCD has determined the common land use types that are known to produce odors in the Basin. These types are shown in Table 4.3.F.

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

Regional Transportation Plan/Sustainable Communities Strategy. Regional Transportation Plans (RTPs) are State-mandated plans that identify long-term transportation needs for a region's transportation network. Fresno Council of Governments' (FCOG) 2018 RTP charts the long-range vision of regional transportation in Fresno County through the year 2042. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying priorities for the anticipated available funding for the 1,100 projects and multiple programs included within it. Senate Bill 375 (SB 375),

Table 4.3.F: Screening Levels for Potential Odor Sources

Odor Generator	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: San Joaquin Valley Air Pollution Control District (2015).

which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each metropolitan planning organization to prepare a Sustainable Communities Strategy (SCS) as an integrated element of the RTP that is to be updated every four years. The SCS is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks. Fresno COG has included the SCS in its 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 NAAQS. Meeting the NAAQS often requires emissions reductions from mobile sources. According to the Clean Air Act, transportation plans, programs, and projects cannot:

- Create new NAAQS violations;
- Increase the frequency or severity of existing NAAQS violations; or
- Delay attainment of the NAAQS.

In practice, air quality plans include criteria pollutant emission budgets required for attainment of air quality standards by mandated deadlines. The budgets must not be exceeded considering projected growth in mobile source activity. The FCOG 2019 Conformity Analysis determined that the conformity tests for ozone, PM_{10} and $PM_{2.5}$ revealed that all years are projected to be less than the approved emissions budgets and, as such, the conformity tests are satisfied.

Fresno County General Plan. Fresno County addresses air quality in the Open Space and Conservation Element of the County General Plan. Applicable air quality policies and action items from the General Plan are listed in Table 4.3.G.

Table 4.3.G: Fresno County General Plan Policies Related to Air Quality

Policy/Action Item No.	Policy/Action Item
Open Space and Conservation Element	
Policy OS-G.1	The County shall develop standard methods for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents. The County will do this in conjunction with the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the cities in Fresno County.
Policy OS-G.2	The County shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The County shall require projects to comply with the County's adopted air quality impact assessment and mitigation procedures.
Policy OS-G.12	The County shall continue, through its land use planning processes, to avoid inappropriate location of residential uses and sensitive receptors in relation to uses that include but are not limited to industrial and manufacturing uses and any other use which have the potential for creating a hazardous or nuisance effect.
Policy OS-G.13	The County shall include fugitive dust control measures as a requirement for subdivision maps, site plans, and grading permits. This will assist in implementing the SJVUAPCD's particulate matter less than ten microns (PM10) regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.
Policy OS-G.14	The County shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.

Source: General Plan (County of Fresno 2000).

4.3.3 Impacts and Mitigation Measures

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

4.3.3.1 Significance Criteria

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

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

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

c. Expose sensitive receptors to substantial pollutant concentrations; or

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

4.3.3.2 Regional Emissions Thresholds

A threshold of significance is defined by the SJVAPCD in its GAMAQI[9] as an identifiable quantitative, qualitative, or performance level of a particular environmental effect. Non-compliance with a threshold of significance means the effect will normally be determined to be significant. Compliance with a threshold of significance means the effect normally will be determined to be less than significant. The SJVAPCD has established thresholds of significance for criteria pollutant emissions generated during construction and operation of projects as shown in Table 4.3.H.

Table 4.3.H: SJVAPCD Construction and Operation Thresholds of Significance (Tons per Year)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Construction Thresholds	100	10	10	27	15	15
Operation Thresholds	100	10	10	27	15	15

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

The emissions thresholds in the SJVAPCD GAMAQI were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

4.3.3.3 Health Risk Thresholds

Both the State and federal governments have established health-based ambient air quality standards (AAQS) for seven air pollutants. For other air pollutants without defined significance standards, the definition of substantial pollutant concentrations varies. For TACs, "substantial" is taken to mean that the individual health risk exceeds a threshold considered to be a prudent risk management level.

The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximum exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations, 350 days per year. The SJVAPCD's *Update to the District's Risk Management Policy to Address the OEHHA Revised Risk Assessment Guidance Document* states that emissions of TACs are considered significant if an HRA shows an increased risk of greater than 20 in 1 million.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multi-

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

pathway consideration when applicable. The project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level. The project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

4.3.3.4 Project Impacts

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

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a nonattainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. To bring the San Joaquin Valley into attainment, the SJVAPCD adopted the 2022 Plan for the 2015 8-hour ozone standard in December 2022 to satisfy Clean Air Act requirements and ensure attainment of the 70 parts per billion (ppb) 8-hour ozone standard.[10]

To assure the Air Basin's continued attainment of the EPA PM10 standard, the SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007. SJVAPCD Regulation VIII (Fugitive PM10 Prohibitions) is designed to reduce PM_{10} emissions generated by human activity. The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards in November 2018 to address the EPA 1997 annual $PM_{2.5}$ standard of 15 µg/m^3 and 24-hour $PM_{2.5}$ standard of 65 µg/m^3, the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m^3, and the 2012 annual $PM_{2.5}$ standard of 12 µg/m^3.

CEQA requires that certain proposed projects be analyzed for consistency with the applicable air quality plan as it relates to a region's non-attainment status. An air quality plan describes air pollution control strategies to be implemented in a non-attainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. As discussed above, the SJVAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. Therefore, to bring the SJVAB into attainment, the SJVAPCD adopted the 2022 Plan for the 2015 8-Hour Ozone Standard in December 2022 to satisfy Clean Air Act requirements and ensure attainment of the 75 parts per billion (ppb) 8-hour ozone standard.

To assure the SJVAB's continued attainment of the EPA PM_{10} standard, the SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007. SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) is designed to reduce PM_{10} emissions generated by human activity. The SJVAPCD

[10] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2022. *2022 Plan for the 2015 8-Hour Ozone Standard*. December 15. Website: https://ww2.valleyair.org/media/q55posm0/0000-2022-plan-for-the-2015-8-hour-ozone-standard.pdf (accessed October 2023).

adopted the 2018 plan for the 1997, 2006, and 2012 $PM_{2.5}$ standards to address the EPA federal annual $PM_{2.5}$ standard of 12 µg/m^3, established in 2012.

For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the proposed project is anticipated to occur in four phases occurring over a total 44-month period starting in 2024 and would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. Implementation of measures required under SJVAPCD's Regulation VIII, described in greater detail under Section 4.3.3.4 (b), would further reduce construction dust impacts. As discussed below and shown in Table 4.3.I, long-term operational emissions associated with the proposed project, including area, energy, and mobile source emissions, would also not exceed SJVAPCD established significance thresholds. In addition, as discussed below, the proposed project would comply with Best Practice Standards (BPS) and emission control measures for stationary equipment such as pistachio dryers by including the use of an electric motor to drive combustion air fans. As such, the proposed project would include all applicable BPS measures for stationary sources. Therefore, impacts related to the proposed project's potential to conflict with or obstruct implementation of the applicable air quality plan would be less than significant.

Table 4.3.I: Project Construction Emissions (Tons Per Year)

Project Construction	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
2024	0.1	2.7	2.1	<0.1	0.4	0.2
2025	0.1	2.6	2.2	<0.1	0.2	0.1
2026	0.1	2.6	2.2	<0.1	0.2	0.1
2027	0.6	2.2	1.9	<0.1	0.1	0.1
2028	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum Annual Construction Emissions	**0.6**	**2.7**	**2.2**	**<0.1**	**0.4**	**0.2**
SJVAPCD Thresholds	**10.0**	**10.0**	**100.0**	**27.0**	**15.0**	**15.0**
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (October 2023).
CO = carbon monoxide
NO_x = nitrous oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide

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

Level of Significance Without Mitigation: Less than Significant

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

The SJVAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SJVAPCD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

The proposed project would consist of the construction of a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Short-Term Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NOx, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Construction activities associated with implementation of the proposed project would include grading, paving, and building activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SJVAPCD has implemented Regulation VIII measures for reducing fugitive dust emissions (PM_{10}). With the implementation of Regulation VIII measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROG, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area,

CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions for the proposed project were analyzed using the California Emissions Estimator Model (CalEEMod). Construction of the proposed project is anticipated to occur in four phases over a 44-month period starting in 2024. Construction phases are expected to occur consecutively; therefore, to be conservative this analysis evaluates construction emissions as a whole and not per phase. Construction actives would include site preparation, grading, building construction, paving, and architectural coating. The proposed project would not require the import or export of soil, which was included in CalEEMod. In addition, this analysis assumes that the proposed project would be constructed using Tier 2 construction equipment, which was also included in CalEEMod. This analysis also assumes that the proposed project would comply with SJVAPCD's Regulation VIII which would further reduce construction dust impacts. Other precise details of construction activities are unknown at this time; therefore, default assumptions (e.g., construction worker and truck trips and construction fleet activities) from CalEEMod were used. Construction-related emissions are presented in Table 4.3.I. CalEEMod output sheets are included in Appendix B.

As described in Section 4.3.3.4 (a) above, for a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality, and a project should comply with applicable offset requirements that reduce project emissions pursuant to goals of SJVAPCD air quality plans.

As shown in Table 4.3.I, construction emissions for the proposed project would not exceed the SJVAPCD annual threshold for construction emissions. In addition to the construction period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction. These control measures are intended to reduce the amount of PM_{10} emissions during the construction period. Implementation of the Regulation VIII fugitive dust control measures outlined below would be required to ensure that the proposed project further reduces the short-term construction period air quality impacts and ensures compliance with air quality plans.

With implementation of Regulation VIII measures for dust control, construction of the proposed project would result in a less than significant impact related to a cumulative considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

Consistent with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/ suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)

- Following the addition of materials to, or the removal of materials from, the surface of out-door storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.

Long-Term Operational Emissions. Long-term air pollutant emission impacts associated with the proposed project are those related to mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and Off-Road sources (e.g., operational equipment).

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Trip generation rates for the proposed project were based on the project's trip generation estimate, as identified in Section 4.13, Transportation. As discussed in Section 4.13.3.2 (b) of Section 4.13, Transportation, the proposed project would generate approximately 249 average daily trips, including 43 employee trips, 4 service vehicle trips, 190 raw material hauling truck trips, and 12 dry waste hauling truck trips. This analysis assumes that the hauling truck trips would travel approximately 40 miles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, as well as the operation of special processing equipment, including a conveyor system, pistachio pre-cleaning equipment, and gas-powered dryers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Area source emissions associated with the proposed project would include emissions from the use of architectural coatings. In addition, the proposed project would also utilize operational equipment and special processing equipment, including a conveyor system, pistachio pre-cleaning equipment, and gas-powered dryers. All off-road equipment (i.e., bobcats, frontend loaders, forklifts) and pre-cleaning special machinery would be all electric; however, industrial dryers would utilize natural gas. Energy estimates for stationary equipment were provided by the project Applicant (see Section 3.0 Project Description, Table 3.A) and added to the overall energy consumption of the project as part of the non-title 24 section in CalEEMod. The SJVAPCD has identified BPS for pistachio dryers and dehydrators[11] that can be used to determine significance of project specific impacts. The proposed project would comply with BPS and emission control measures for pistachio dryers by including the use of an electric motor to drive combustion air fans. As such, the proposed project would include all applicable BPS measures for stationary sources.

Emission estimates for operation of the project were calculated using CalEEMod. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the SJVAB. As discussed in Section 3.3.1 of Section 3.0, Project Description, the proposed project would construct a 5,608 sq ft dumping pit area, a 3,900 sq ft pre-cleaning area, and two huller buildings of approximately 22,940 sq ft, and a 155,169 sq ft industrial building for a total of approximately 201,049 sq ft of building area. This analysis assumes that all areas not covered by buildings would be paved. Therefore, the proposed project was conducted using land codes *General Heavy Industry, Other Non-Asphalt Surfaces,* and *Parking Lot.* Based on information provided by the project Applicant, it is estimated that the proposed project processing equipment would generate a maximum of 8.94 MW per day of electricity and 8.90 million standard cubic feet per day (MMSCFD) of natural gas for dryers and 2.34 MMSCFD of natural gas for generators (See Section 3.0, Project Description, Table 3.A), which was included in CalEEMod. In addition, as described in Section 3.3.2.3 of Section 3.0, Project Description, the proposed project would generate approximately 311.4 million gallons of wastewater annually and 8,562,667 pounds of solid waste, which was also included in CalEEMod. Two CalEEMod analyses were prepared for the operational analysis. One CalEEMod run evaluated operational and vehicle trip emissions and another CalEEMod run evaluated four plus-axle truck trip emissions.

The annual emissions associated with project operational trip generation, energy, and area sources are identified in Table 4.3.J for ROG, NO_X, CO, sulfur oxide (SO_X), PM_{10}, and $PM_{2.5}$. CalEEMod output sheets are included in Appendix B.

The results in Table 4.3.J indicate the proposed project's operational emissions would not exceed the significance criteria for annual ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed project would result in a less-than-significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the proposed project region is in nonattainment under an applicable federal or State ambient air quality standard.

[11] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2010. Best Performance Standards. Website: https://www.valleyair.org/Programs/CCAP/bps/Draft%20BPS%20Evaluation%20-%20Pistachio%20Dryers.pdf (accessed October 2023).

Table 4.3.J: Project Operation Emissions (Tons Per Year)

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile source Emissions – Vehicles and Light Duty Trucks	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Mobile Source Emissions – Heavy Heavy Trucks	0.1	4.9	1.0	<0.1	1.4	0.4
Area Source Emissions	1.1	<0.1	0.8	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.6	0.5	<0.1	<0.1	<0.1
Off-Road Equipment Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Operation Emissions	**1.2**	**5.5**	**1.4**	**<0.1**	**1.4**	**0.4**
SJVAPCD Significance Threshold	**10.0**	**10.0**	**100.0**	**27.0**	**15.0**	**15.0**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (October 2023).
Note: Some values may not appear to add up correctly due to rounding.
CO = carbon monoxide
NO_X = nitrous oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxide

Impact AIR-2: The project would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standards.

Level of Significance Without Mitigation: Less than Significant

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

This section describes the potential impact on sensitive receptors from construction and operation of the proposed project. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. The proposed project site is surrounded primarily by agricultural land uses. The closest potentially sensitive receptor to the project site is Pilibos Ranch, located approximately 480 feet southeast of the project site boundary.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement SJVAPCD Regulation VIII measures described above to ensure that the project would not to result in the exposure of sensitive receptors to substantial pollutant concentrations.

The proposed project would include a pistachio processing facility. As identified in Table 4.3.J, project operational emissions of criteria pollutants would be below SJVAPCD significance thresholds. The proposed project would include operational equipment; however, all processing operational equipment would be electric and would not generate exhaust emissions. In addition, as identified in Section 4.13.3.2 (b) of Section 4.13, Transportation, the proposed project would generate approximately 249 average daily trips, including 43 employee trips, 4 vehicle service trips, 190 raw

material hauling truck trips, and 12 dry waste hauling truck trips. Tractor and field trucks would be expected to access the site from the surrounding orchards via unpaved farm roads. As the project site would contain multiple access points, off-site queuing of trucks is not anticipated. Furthermore, the proposed project trip generation evaluates a worst-case scenario for daily trips generated during peak harvesting season. As such, daily truck trips would be lower during off season and emissions resulting from diesel and gasoline exhaust would be minimal. Since the proposed project would be used for typical processing, hulling, and packing services, it is not expected that trucks would be idling at the project site. In addition, idling of trucks would be limited by the CARB's In-Use Off-Road Diesel Vehicles regulation, which limits idling to 5 minutes or less. With compliance with CARB's In-Use Off-Road Diesel Vehicles regulation and based on the number of daily truck trips, operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

To determine the increased cancer risk associated with the proposed project, LSA utilized the SJVAPCD's Prioritization Calculator, which is included in Appendix C. The Prioritization Calculator is a screening tool developed by the SJVAPCD that can be used to determine if additional air dispersion modeling is needed to determine cancer risk associated with a project. If a project has a less than significant health risk under the Prioritization Calculator, no additional analysis is required.

The analysis for on-site truck emissions assumes that 5 percent of the project-related mobile sources, which is an estimate of the amount of project-related on-site vehicle and truck travel, would occur on site. Considering the total trip length included in CalEEMod, the 5 percent assumption is conservative. Based on the diesel emissions anticipated for the project and the distance to the nearest sensitive receptor, using the Prioritization Calculator, it is estimated the project would result in a cancer score of 9.65 in 1 million cancer cases, which is below the SJVAPCD threshold of significance of 20 in 1 million. Chronic and acute risk scores would also be well below the SJVAPCD thresholds. The Prioritization Calculator is a conservative assumption of potential health risks. As such, the project would not expose any sensitive receptors significant health risks. Thus, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction and operation. Impacts would be less than significant.

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

Level of Significance Without Mitigation: Less Than Significant

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction, the various diesel-powered vehicles and equipment in use on site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. Because the project's potential construction-related odor impacts are localized and temporary, they would not adversely affect a substantial number of people. Therefore, the project's potential construction-related odor impacts are less than significant.

The SJVAPCD addresses odor criteria in the GAMAQI[12]. The district has not established a rule or standard regarding odor emissions, rather, the district has a nuisance rule: "Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact". The proposed project would include the construction of settling ponds to filter out organic debris from wastewater from project operations. Larger debris would be removed from the wastewater with screens before entering the settling ponds, where finer debris would be allowed to settle before removal. The organic waste material obtained from the settling ponds would be transported off site at the end of the harvest season to firms that provide composting services or to ranches for cattle feed. It is anticipated that the settling ponds could generate odors once operational. However, the proposed project would be required to comply with the State and County waste diversion and reduction requirements that would minimize odors. The closest potentially sensitive receptor to the project site is Pilibos Ranch, located approximately 480 feet southeast of the project site boundary. Although odors are not anticipated due to the removal of organic waste, given that the distance to the nearby sensitive receptor is within the 1-mile screening distance for odors established by the SJVAPCD, mitigation would be required to ensure the project would not adversely affect a substantial number of people.

Impact AIR-4: The project would result in significant odors that could adversely affect a substantial number of people.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure AIR-4 Prior to issuance of grading or building permits, the project applicant shall develop an odor control plan detailing all methods of nuisance odor control as it applies to operation of the proposed settling ponds, and shall submit it to the SJVACPD and the County of Fresno Department of Public Works and Planning for approval. The odor control plan shall be made available to all employees and shall be used as a training aid for new employees.

Level of Significance With Mitigation: Less than Significant

4.3.3.5 Cumulative Impacts

According to the SJVAPCD, regional air pollution is largely a cumulative impact. No single project is sufficient in size to independently create regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

The SJVAPCD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. SJVAPCD nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very

[12] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2010. Best Performance Standards. Website: https://www.valleyair.org/Programs/CCAP/bps/Draft%20BPS%20Evaluation%20-%20Pistachio%20Dryers.pdf (accessed October 2023).

nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Therefore, if the proposed project's annual emissions of construction- or operational-related criteria air pollutants exceed any applicable threshold established by the SJVAPCD, the proposed project would result in a considerable contribution to a cumulatively significant impact. As shown in Table 4.1.I and Table 4.1.J, the proposed project would not generate significant construction and operational emissions. As shown in the project-specific air quality impacts discussion above, the proposed project would not result in individually significant impacts and therefore the proposed project would not result in a cumulatively considerable contribution to regional air quality impacts. Cumulative impacts would be considered less than significant.

In addition, as demonstrated in the analysis, the health risk levels to nearby residents from project construction- and operation-related emissions of TACs would be well below the SJVAPCD's thresholds. Therefore, the proposed project would not result in any individual health risk in excess of the thresholds considered to be prudent risk management levels. Therefore, the proposed project's cumulative air quality impacts on sensitive receptors are less than significant.

Impact AIR-5: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to air quality.

Level of Significance Without Mitigation: Less Than Significant

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4.4 BIOLOGICAL RESOURCES

This section describes the existing biological resources of the project site and evaluates the potential impacts associated with the proposed project, both at the individual and cumulative levels. This section also addresses local, State, and federal regulations as they pertain to project impacts on biological resources. The analysis in this section is based on the findings of the Biological Resources Assessment[1] for the proposed project (Appendix D).

4.4.1 Environmental Setting

4.4.1.1 Biotic Habitat

The project site is approximately 98 acres in size and is currently used for agricultural operations. The project site is surrounded by active farmland, and is bounded by fallow agricultural field to the south, almond orchard to the southwest, fallow field and garlic field to the west, vineyard to the northwest, melons to the north, and pomegranate orchard to the east. The project site is relatively flat and has been completely disturbed. A few agricultural ditches occur near the boundaries of the project site.

Over 75 percent of the project site was being cultivated with cantaloupe on the July 26, 2021 field survey of the project site, with the remaining area (near the intersection of West Panoche Road and South Newcome Avenue) consisting of ruderal vegetation. Ruderal areas consisted mainly of barren to sparsely vegetated early successional non-native herbaceous weed species. Some of the weed species observed in ruderal areas included horseweed (*Erigeron bonariensis*), five-hook bassia (*Bassia hyssopifolia*), prickly lettuce (*Lactuca serriola*), and common morning glory (*Convolvulus arvense*). Other plant species observed included a dozen Mexican fan palms (*Washingtonia filifera*) near the easter portion of the project site and two mulberry trees (*Morus alba*) near the southern portion of the project site.

Amphibians are absent from the site due to the absence of aquatic habitats on the site. Reptile species are also not expected to occur in the project site due to absence of suitable habitat. The trees onsite provide suitable nesting habitat for a variety of birds, including the Loggerhead shrike (*Lanius ludovicianus*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), or great horned owl (*Bublo virginianus*). Ground-nesting birds such as the killdeer (Charadrius vociferus) and western meadowlark (*Sturnella neglecta*) could possibly us the barren ruderal areas or agricultural road shoulders for nesting. A total of three bird species were observed on the project site during the field survey: a house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), and western kingbird (*Tyrannus verticalis*).

No small mammal burrows were observed within ruderal areas and agricultural fields in the project site or immediately adjacent to the project site. However, roosting bats, including species such as the pallid bat (*Antrozous pallidus*) and Townsends's big-eared bat (*Corynorhinum townsendii*) could also make use of trees within or near the project site.

[1] LSA Associates, Inc. 2021. Biological Resources Assessment for the Proposed Pistachio Processing Facility, 98-acres west of West Panoche Road, Fresno County, California.

4.4.1.2 Special-Status Plants and Animals

A number of species of plants and animals within the project area have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the State's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described in Section 4.4.2 Regulatory Setting, federal and State regulations have provided the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting the diversity of plant and animal species native to the State. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under federal and State endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists (i.e., California Rare Plant Ranks [CRPR]) of native plants considered rare, threatened, or endangered). Collectively, these plants and animals are referred to as "special status species." Tables 4.4.A and 4.4.B respectively list the special-status animal and plant species found to potentially occur in the project vicinity.

Electronic database records reviewed during evaluation of existence of sensitive or special-status species plant or animal species in the project vicinity include the California Natural Diversity Data Base (CNDDB), which was queried for special status species occurrences in the nine U.S. Geological Survey (USGS) 7.5-minute quadrangles containing and surrounding the project site. These quads included Chaney Ranch, Broadview Farms, Firebaugh, Coit Ranch, Levis, Monocline Ridge, Turney Hills, Chounet Ranch, and Hammonds Ranch, along with a query of records within a 5-mile radius from the project site. Other sources of information for these tables included the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants, the United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) Online System, and eBird.org.

4.4.1.3 Sensitive Natural Communities

Sensitive natural communities are those that are of limited distribution, distinguished by significant biological diversity, home to special status plant and animal species, of importance in maintaining water quality or sustaining flows, etc. Examples of sensitive natural communities include various types of wetlands, riparian habitat, and valley scrub habitats. CDFW has assigned State Ranks to California's natural communities that reflect the condition and imperilment of that community throughout its range within the State. State Ranks are represented with a letter and number score. Older ranks, which need to be updated in the CNDDB, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats. The project site does not support sensitive natural communities.

4.4.1.4 Wildlife Movement Corridors

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and interpopulation movements. Movement corridors in California are typically associated with valleys, rivers and creeks supporting riparian vegetation, and ridgelines. Based on field observations and the location of the project site, which is surrounded by agricultural uses and roads, there are no indications that the project site functions as a wildlife movement corridor.

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

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
San Benito Onion	*Allium howellii* var. *sanbenitense*	US: – CA: – CNPS 1B.3	Occurs in openings in often on steep slopes of clay soils in chaparral, valley and foothill grassland between 1,280 -4,170 ft in elevation.	March - June	**Not expected.** Although clay soils are present, the highly disturbed site does not support suitable habitat for this species.
Heartscale	*Atriplex cordulata* var. *cordulata*	US: – CA: – CNPS: 1B.2	Annual herb occurring in chenopod scrub, meadows, seeps and valley/foothill grasslands (sandy) in saline or alkaline soil between 0 and 1,837 ft in elevation. Found in the Central Valley counties.	April-October	**Not expected.** Saline-alkaline soils are absent. The highly disturbed site does not support suitable habitat for this species.
Lost Hills crownscale	*Atriplex coronata* var. *vallicola*	US: – CA: –	Occurs in powdery, alkaline soils that are vernally moist in chenopod scrub, valley and foothill grassland, and vernal pools. Associated species are *Frankenia, Atriplex* ss; and *Distichlis* between 150 – 2,900 ft. in elevation.	April - August	**Not expected.** Suitable habitat is absent from the project site for this species. None of the associated species are present.
Lesser Saltscale	*Atriplex minuscula*	US: – CA: – CNPS 1B.1	Occurs in upland playas of shadscale scrub, alkali sink and valley grasslands in California's Central valley between Kern County and Contra Costa County at less than 328 ft. in elevation.	April - October	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Subtle Orache	*Atriplex subtilis*	US: – CA: – CNPS 1B.2	Occurs in saline depressions between Kern County and Stanislaus Counties in California's central valley less than 230 ft. in elevation.	June - October	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Hall's Tarplant	*Deinandra halliana*	US: – CA: – CNPS: 1B.2	Occurs in open slopes and sink edges of shadscale scrub, foothill woodland, and valley grassland on the far west side of the Central Valley and in the inner coast range of San Luis Obispo Counties though Monterey Counties between 984 – 3280 ft. in elevation.	April - May	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Recurved Larkspur	*Delphinium recurvatum*	US: – CA: – CNPS: 1B.2	Occurs in shadscale scrub, foothill woodland, and valley grassland with wide range of elevations between Los Angeles to Butte Counties.	March – June	**Not expected.** The highly disturbed site does not support suitable habitat for this species.

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

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
Spiny-sepaled button-celery	*Eryngium spinosepalum*	US: – CA: – CNPS: 1B.2	Annual/perennial herb occurring in valley/ foothill grasslands and vernal pools between 262 and 3,198 ft in elevation. Found in Central Coast and Central Valley counties.	April- June	**Not expected.** The highly disturbed site does not support suitable habitat for this species
Alkali-sink goldfields	*Lasthenia chrysantha*	US: – CA: – CNPS: 1B.1	Annual herb occurring in alkaline vernal pools between 0 and 656 ft in elevation. Found in Central Valley counties.	February-June	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Pale-yellow Layia	*Layia heterotricha*	US: – CA: – CNPS: 1B.1	Annual herb occurring in wetland-riparian, shadscale scrub and valley grassland between Ventura and Fresno Counties at elevation.	March - June	**Not expected.** The highly disturbed site does not support suitable habitat for this species
Munz's Tidy-Tips	*Layia munzii*	US: – CA: – CNPS: 1B.2	Annual occurring in alkaline clay soils of the southern San Joaquin Valley between 540-2,625 ft. in elevation.	March - April	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Panoche Peppergrass	*Lepidium jaredii* ssp. *album*	US: – CA: – CNPS: 1B.2	Annual occurring in alkali bottoms, slopes, washes, dry hillsides, vertic clay, acidic and/or gypsoferus soils in the southwestern San Joaquin Valley and southeastern inner coast range between 1,640 – 2,300 ft. in elevation.	March - April	**Not expected.** The highly disturbed site does not support suitable habitat for this species.
Showy Golden Madia	*Madia radiata*	US: – CA: – CNPS: 1B.1	Annual occurring in grassy or open slopes of vertic clay and rarely serpentinite soils between 65 -3,900 ft. in elevation.	March - May	**Not expected.** The highly disturbed site does not support suitable habitat for this species
San Joaquin Wooly Threads	*Monolopia congdonii*	US: –E CA: – CNPS: 1B.2	Annual occurring in grassland and sandy soils in the southern San Joaquin Valley between 295-2,3000 ft. in elevation.	February - May	**Not expected.** The highly disturbed site does not support suitable habitat for this species. There are no known historical records of occurrence in the project vicinity and suitable habitat is absent within the project site.
Panoche navarretia	*Navarretia panochensis*	US: CA: – CNPS: 1B.3	Annual herb newly rediscovered from eastern Fresno and western San Benito Counties.	April - June	**Not expected.** The highly disturbed site does not support suitable habitat for this species.

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

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
Sanford's arrowhead	*Sagittaria sanfordii*	US: – CA: – CNPS: 1B.2	Perennial rhizomatous herb (emergent) occurring in marshes and swamps between 0 and 2,132 ft in elevation. Found throughout California counties.	May-October	**Not expected.** The highly disturbed site does not support suitable habitat for this species. The highly maintained onsite ditches were mostly barren of vegetation.
Chaparral Ragwort	*Senecio aphanactis*	US: – CA: – CNPS: 2B.2	Annual occurring in alkaline flats and dry open rocky areas in central and southern California coast ranges to Baja California, at elevations between 32 -1,800 ft. in elevation.	January - April	**Not expected.** The highly disturbed site does not support suitable habitat for this species.

Source: Compiled by LSA (2021).

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Plant (CSP), California Special Animal (CSA)

[1] Project vicinity = Project site plus a 5-mile buffer

California Native Plant Society Designations:
1B = Rare, threatened, or endangered in California and elsewhere
2B = Rare, threatened, or endangered in California, but not elsewhere
0.1 = seriously endangered
0.2 = fairly endangered

CA = California
CNPS = California Native Plant Society
ft = foot/feet
m = meter/meters
mi = mile/miles
US = United States

Table 4.4.B: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	Habitat and Comments	Likelihood of Occurrence and Rationale
INVERTEBRATES				
Crotch bumble bee	*Bombus crotchii*	US: -- CA: CE	Occurs primarily in California through most of southwestern California and uncommonly in Baja California and southwest Nevada. Inhabits open grassland and scrub habitat, nests underground.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Vernal pool fairy shrimp	*Branchinecta lynchi*	US: FT CA: –	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
AMPHIBIANS				
Northern California legless lizard	*Anniella pulchra*	US: -- CA: SSC	Endemic from the west central California including parts of the central valley and coast range from sea level to around 5,900 ft. in elevation. Occurs in moist warm loose soil with vegetative cover and moisture.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Foothill yellow-legged frog	*Rana boylii*	US: – CA: CE	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
California red-legged frog	*Rana draytonii*	US: FT CA: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Western spadefoot	*Spea hammondii*	US: – CA: SSC	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 ft. Requires temporary pools for breeding.	**Not expected.** Suitable scrub habitats are absent from the project and vicinity.
REPTILES				
California glossy snake	*Arizpna elegans occidentalis*	US: – CA: SSC	This nocturnal snake in habits arid scrub, rocky washes, grasslands and chapparal from the eastern part of the San Francisco Bay area south to the northwestern Baja California; absent along the central coast.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Western pond turtle	*Emys marmorata*	US: – CA: SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Not expected.** There is one known record of occurrence in the project vicinity (CNDDB 2001) and suitable habitat is absent from the project site.

Table 4.4.B: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	Habitat and Comments	Likelihood of Occurrence and Rationale
Blunt-nosed leopard lizard	*Gambelia sila*	US: FE CA: CE	Occurs in open sparsely vegetated areas along sandy washes in the San Joaquin Valley and adjacent foothills, as well as Carrizo Plain and Cuyama Valley. Use small rodent borrows for cover and breeding.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
San Joaquin coachwhip	*Masticophis flagellum ruddocki*	US: – CA: SSC	Occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub habitat. Takes refuge in rodent burrows, shaded vegetation and surface objects. Endemic to California, ranges from the Sacramento Valley south to the grapevine in Kern County into the inner south coast ranges.	**Not expected.** There is one known record of occurrence in the project vicinity (CNDDB 2001) and suitable habitat is absent from the project site.
Coast horned lizard	*Phyrnosoma blainvillii*	US: – CA: SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Fragmented distribution from Baja California west to the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Giant Garter Snake	*Thamnophis gigas*	US: FT CA: CT	Aquatic snake found in marshes, shoughs, drainage canals, and irrigation ditches from Glenn County to the southern edge of the San Francisco Bay Delta, and from Merced County to northern Fresno County. Absent from 98% of its former range in San Joaquin Valley.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
BIRDS				
Tricolored blackbird	*Agelalus tricolor*	US: – CA: CT	Occurs in open country or marshes in large colonies mainly in CA Central Valley. Breeds in freshwater marshes with tall emergent vegetation, feeds on insects.	**Not expected.** Suitable colonial nesting habitat and foraging habitat are absent from the project site.
Short-eared owl	*Asio flammeus*	US: – CA: SSC	Occurs in large open areas with low vegetation, and nest in dry areas on the ground surface amid grasses and low plants. The site in in the southern portion of its breeding range. The range, extends across North America.	**Not expected.** Suitable nesting habitat is extremely marginal on the project site. Foraging habitat is absent since no small mammal burrows were found.
Burrowing owl	*Athene cunicularia*	US: – CA: SSC	Burrows in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**Not expected.** Suitable nesting habitat is absent since no small mammal burrows were found on or immediately adjacent to the site.
Golden eagle	*Aquila chrysaetos*	US: – CA: FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Not expected.** Suitable nesting habitat is extremely marginal on the project site. Foraging habitat is absent since no small mammal burrows were found.

Table 4.4.B: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	Habitat and Comments	Likelihood of Occurrence and Rationale
Swainson's hawk	*Buteo swainsoni*	US: – CA: CT	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannas, and agricultural/ranch lands. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent populations.	**Not expected.** Suitable nesting and foraging habitat is absent from the project site. Foraging habitat is limited to absent; Small mammal burrows were absent.
California condor	*Gymnogyps californianus*	US: FE CA: --	Nest in caves on cliff faces in mountains up to 6,000 feet in elevation in Central California, northern Baja, and great basin area.	**Not expected.** Suitable nesting and foraging habitat is absent from the project site. Foraging habitat is limited to absent. Small mammal burrows were absent.
MAMMALS				
Nelson's antelope squirrel	*Ammospermophilus nelsoni*	US:-- CA: CT	This ground-dwelling squirrel occurs on the floor of the San Joaquin Valley to around 3,600 feet in elevation of the Temblor Mountains, centered around Lokern and Elk Hills in western Kern County and in the Carrizo and Elkhorn Plains in eastern San Luis Obispo County.	**Not expected.** Suitable breeding and foraging habitat are absent from the project site and adjacent lands. An historical occurrence from 1920 was from 4 miles north to northwest of the project site.
Pallid bat	*Antrozous pallidus*	US: – CA: SSC	Found in arid and semi-arid regions across much of the American west, the pallid bat can be found in rocky outcroppings to open sparsely vegetated grassland and roost in small colonies in buildings, caves and cracks in rocks.	**Not expected.** Suitable colonial roosting habitat and foraging habitat are absent from the project site.
Fresno kangaroo rat	*Dipodomys nitratoides exisil*	US: –FE CA: --SE	Adapted to survival in an arid environment, Fresno kangaroo rats breed in relatively light sandy soils of in alkali sink communities. Currently there are no known populations within its historical range in Merced, Madera, and Fresno Counties. Critical habitat for this species occurs approximately 14 miles west of the site.	**Not expected.** Suitable breeding and foraging habitat are absent from the project site and adjacent lands.
Giant Kangaroo rat	*Dipodomys ingens*	US: –FE CA: SE	Inhabits most arid, southeastern edge of central California San Joaquin Valley and adjacent valley and plateaus of the Inner Coast Range at elevations ranging between 90-885 meters.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
Western Mastiff bat	*Eumops perotic californicus*	US: – CA: SSC	This large free-tailed cliff-dwelling bat occur most frequently in broad open areas in a variety of habitats, from dry desert washes, flood plains, chaparral, oak woodland, forest, grassland meadows and agricultural areas.	**Not expected.** Suitable roosting habitat is absent. Foraging habitat is extremely limited due to the disturbed nature of the site**.**
Western red bat	*Lasiurus blossevillii*	US: – CA: SSC	Roosts in riparian trees below 6,500 ft. in elevation throughout much of western north American and South America.	**Moderate probability of occurrence.** Onsite trees would be marginally suitable for western red bat. Foraging habitat is extremely limited due to the highly disturbed nature of the project site.

Table 4.4.B: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	Habitat and Comments	Likelihood of Occurrence and Rationale
Hoary bat	*Lasiurus cinereus*	US: – CA: CSA	Lives in forests of the eastern U.S. and in arid deserts of the southwest, but is most abundant in forests and croplands of the Plains states and the forests of the Pacific Northwest. Hoary bats thrive in diverse forest habitat with a mixture of forest and small open areas provide edges.	**Not expected.** Suitable roosting habitat is absent. Foraging habitat is extremely limited due to the disturbed nature of the site. A historical occurrence from 1946 is from a1.5 mile east of the site.
San Joaquin pocket mouse	*Perognathus inornatus*	US: – CA: CSA	Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.	**Not expected.** There are no known historical records of occurrence in the project vicinity [1]. The disturbed land uses on the project site offer no suitable habitat for this species.
American badger	*Taxidea taxus*	US: – CA: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Not expected.** Suitable breeding and foraging habitats are absent from the project and adjacent lands. Small mammal burrows are absent from the project site.
San Joaquin kit fox	*Vulpes macrotis mutica*	US: FE CA: CT	Prefers open, level areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance. Some agricultural areas may support these foxes.	**Not expected.** Suitable breeding and foraging habitats are absent from the project and adjacent lands. Small mammal burrows are absent from the project site.

Source: Compiled by LSA (2021).

[1] Project vicinity = Project area plus a 5 mile buffer

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Animal (CSA)

CA = California

ft = foot/feet

m = meter/meters

mi = mile/miles

US = United States

4.4.1.5 Designated Critical Habitat

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Designated critical habitat is absent from the project site and immediately surrounding lands.

4.4.2 Regulatory Setting

4.4.2.1 Federal Regulations

Federal Endangered Species Act. The United States Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (ESA). The ESA provides a process for listing species as either threatened or endangered and methods of protecting listed species. The ESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A "threatened" species is a species that is likely to become endangered. A "proposed" species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list.

Per Section 9 of the ESA, "take" of threatened or endangered species is prohibited. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct (codified at 16 U.S.C.A. § 1532(19). "Take" can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

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

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

Federal Clean Water Act - Section 401. Per Section 401 of the CWA, "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title" (33 U.S.C.A. § 1341(a)(1)). Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board.

Waters of the United States. USACE has primary federal responsibility for administering regulations that concern "waters of the U.S." The Corps acts under two statutory authorities, the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters of the U.S.," and the Clean Water Act (CWA) (Section 404), which governs specified activities in "other waters of the U.S.," including wetlands. The Corps requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters or discharging dredged or fill material into "waters of the U.S." below the ordinary high-water mark in non-tidal waters. The U.S. Environmental Protection Agency (EPA), USFWS, NMFS, and several other agencies can provide comments on Corps permit applications.

The federal government defines wetlands in CWA Section 404 as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR § 328.3(b) and 40 CFR § 230.3). The federal definition of wetlands requires three wetland identification parameters to be present: wetland hydrology, hydric soils, and hydrophytic vegetation.

"Other waters of the U.S." refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR § 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high-water mark. Examples of other waters of the U.S. include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes. Human-made wetland areas that are not regulated under this act include stock watering ponds and created water treatment facilities.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. Under the MBTA, "it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof …" (16 U.S.C.A. § 703(a)).

4.4.2.2 State Regulations

California Endangered Species Act. The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA). CESA applies to "endangered" or "threatened" birds, mammals, fish, amphibians, reptiles, and plants, but does not apply to insects (see 81 Cal. Op. Att'y Gen. 222 (1998)). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Any species determined by the commission as "endangered" on or before January 1, 1985, is an "endangered species." A "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the foreseeable future in the absence of special protection or management. The California Endangered Species Act of 1970 created the categories of "Endangered" and "Rare." The California Endangered Species Act of 1984 created the categories of "Endangered" and "Threatened." On January 1, 1985, all animal species designated as "Rare" were reclassified as "Threatened" (see Fish and Game Code § 2067).

Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats.

"Candidate species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list (Fish and Game Code § 2068).

The CDFW exercises authority over mitigation projects involving State-listed species, including those resulting from CEQA mitigation requirements. Lead agencies are directed by the CESA to consult with the CDFW on projects or actions that could affect listed species. A "taking" may be authorized by the CDFW if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. In addition, the CDFW requires preparation of mitigation plans in accordance with published guidelines.

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

- Is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as Federally-, but not State-, threatened or endangered;

- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- SSCs tend to have a number of factors in common, including that they:
- Occur in small, isolated populations or in fragmented habitat, and are threatened by further isolation and population reduction;
- Show marked population declines;
- Depend on a habitat that has shown substantial historical or recent declines in size and/or quality or integrity;
- Have few California records, or which historically occurred in the State but for which there are no recent records; and
- Occur largely in areas where current management practices are inconsistent with the animal's persistence.

"Species of Special Concern" is an administrative designation that carries no formal legal status per se, but signifies that the species is recognized as sensitive by the CDFW. Section 15380 of the State CEQA Guidelines clearly indicates that species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

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

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

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

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

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

Porter-Cologne Water Quality Act. The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)).

Regional Water Quality Control Board Regulated Activities. Under Section 401 of the CWA, the RWQCB regulates all activities that are regulated by the USACE. Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or discharge of materials into waters of the state that are not regulated by the USACE due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

California Fish and Game Code - Section 3503 and Section 3511. The CDFW administers the California Fish and Game Code. There are particular sections of the Fish and Game Code that are applicable to natural resource management. For example, Section 3503 of the Fish and Game Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. Fish and Game Code Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests, from any form of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is also considered a "taking" by the CDFW. Fish and Game Code Section 3511 lists fully protected bird species where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

Natural Community Conservation Planning Act - Fish and Game Code Sections 2800 et seq. The State of California has adopted the Natural Community Conservation Planning and Habitat Conservation Planning (NCCP/HCP) program to focus on creating a multiple-species, multiple-habitat subregional Reserve System and implementing a long-term "adaptive management" program. To

accomplish this, the NCCP/HCP creates a subregional habitat Reserve System and implements a coordinated program to manage biological resources within the habitat reserve. The creating of a defined Reserve System provides certainty to the public and to affected landowners with respect to the location of future development and open space within the subregion. The NCCP/HCP was developed with coordination through the CDFW and the USFWS, in order to account for the CESA and the federal ESA. The project site is not located within any NCCP/HCP designated area.

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

- California Rare Plant Rank 1A: Plants believed extirpated in California and either rare or extinct elsewhere.
- California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.
- California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
- California Rare Plant Rank 2B: Plants rare threatened or endangered in California but more common elsewhere.
- California Rare Plant Rank 3: Plants about which more information is needed - a review list.
- California Rare Plant Rank 4: Plants of limited distribution – a watch list.

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

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

4.4.2.3 Local Regulations

Fresno County General Plan. The County's General Plan Open Space and Conservation Element includes objectives and policies that work to provide for long-term preservation, enhancement, and enjoyment of biological resources. Table 4.4.C below includes General Plan policies that address biological resources that are applicable to the project.

Table 4.4.C: Fresno County General Plan Policies Related to Biological Resources

Policy/Action Item No.	Policy/Action Item
Open Space and Conservation Element	
Policy OS-D.2	The County shall require new development to fully mitigate wetland loss for function and value in regulated wetlands to achieve "no-net-loss" through any combination of avoidance, minimization, or compensation. The County shall support mitigation banking programs that can provide the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas
Policy OS-D.3	The County shall require development to be designed in such a manner that pollutants and siltation do not significantly degrade the area, value, or function of wetlands. The County shall require new developments to implement the use of Best Management Practices (BMPs) to aid in this effort.
Policy OS-E.1	The County shall support efforts to avoid the "net" loss of important wildlife habitat where practicable. In cases where habitat loss cannot be avoided, the County shall impose adequate mitigation for the loss of wildlife habitat that is critical to supporting special-status species and/or other valuable or unique wildlife resources. Mitigation shall be at sufficient ratios to replace the function, and value of the habitat that was removed or degraded. Mitigation may be achieved through any combination of creation, restoration, conservation easements, and/or mitigation banking. Conservation easements should include provisions for maintenance and management in perpetuity. The County shall recommend coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.
Policy OS-E.2	The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding. The width of the buffer zone should vary depending on the location, species, etc. A final determination shall be made based on informal consultation with the U.S. Fish and Wildlife Service and/or the California Department of Fish and Game.
Policy OS-E.4	The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by the California Department of Fish and Game officials and the U.S. Fish and Wildlife Service.
Policy OS-E.9	Prior to approval of discretionary development permits, the County shall require, as part of any required environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant resources and/or special-status plants or animals. Such evaluation will consider the potential for significant impact on these resources and will either identify feasible mitigation measures or indicate why mitigation is not feasible.
Policy OS-F.3	The County shall support the preservation of significant areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.
Policy OS-F.5	The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects. The County shall require, as part of the environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based on field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant plant resources and/or special-status plant species. Such evaluation shall consider the potential for significant impact on these resources and shall either identify feasible mitigation measures or indicate why mitigation is not feasible.

Source: General Plan (County of Fresno 2000).

4.4.3 Impacts and Mitigation Measures

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

4.4.3.1 Significance Criteria

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

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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

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 the California Department of Fish and Wildlife or US Fish and Wildlife Service;

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.

4.4.3.2 Project Impacts

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

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

The Fresno County region supports various special-status natural communities, plants, and animals. Tables 4.4.A and 4.4.B above identify those special-status plant and animal species known to occur or that potentially occur in the vicinity of the project site (based on a literature review and experience in the region) and includes detailed information about each species' habitat and distribution, State and federal status designations, and probability of occurrence within the project site. As stated in the Environmental Setting section above, the background research included occurrence records from nine USGS topographic quadrangles surrounding the survey area. A nine-USGS quadrangle search covers a large, variable geographic and topographic area containing numerous habitat types not found within or around the project site.

Special-Status Plants. Seventeen special-status vascular plant species are known to occur in the region. However, no special-status plants exist within the project site or in adjacent parcels. The project site does not contain suitable habitat and is situated outside of the species' known distribution. Therefore, as the project site does not contain any special-status plants, special-status plants would not be impacted by the proposed project.

Special-Status Animal Species. In total, 28 special-status species could potentially occur in the project vicinity; however, 27 are considered unlikely to occur on the project site due to past and ongoing disturbance of the site, the absence of suitable habitat, and/or the project site being situated outside of the species' known distribution. The 28 species considered absent or unlikely to occur on the project site include Crotch bumble bee, Vernal pool fairy shrimp, Northern California legless lizard, Foothill yellow-legged frog, California red-legged frog, Western spadefoot, California glossy snake, Western pond turtle, Blunt-nosed leopard lizard, San Joaquin coachwhip, Coast horned lizard, Giant Garter Snake, Tricolored blackbird, Short-eared owl, Burrowing owl, Golden eagle, Swainson's hawk, California condor, Nelson's antelope squirrel, Pallid bat, Fresno kangaroo rat, Giant Kangaroo rat, Western Mastiff bat, Hoary bat, San Joaquin pocket mouse, San Joaquin kit fox and American badger. The proposed project does not have the potential to impact these species through project-related mortality or loss of habitat as there is little or no likelihood that they are present or would be present during construction activity.

The two special-status species that have the potential to forage over the project site from time to time, but would not roost on the site, include western mastiff bat and pallid bat. These two bat species would not be adversely affected from project-related loss of habitat nor is foraging habitat uniquely important for these species. These species would not be vulnerable to construction-related injury or mortality while foraging because they are highly mobile during foraging and are expected to avoid active construction zones. These bats would be expected to continue to use the project site for foraging after redevelopment. No other special-status species were determined to have a moderate or high probability of occurrence on the project site.

As noted in previous sections, the 98-acre proposed project development area consists of open farmland that is actively used (tilled and planted) annually and does not have on-site orchards. However, the onsite trees within the project discharge water areas have the potential to support nesting birds such as house finch, mourning dove, and western kingbird. Nearly all native birds are protected by the Federal Migratory Bird Treaty Act, the California Migratory Bird Protection Act, and the California Fish and Game Code. Construction activities that occur during the nesting bird season (typically February 1 through September 30) have potential to result in the mortality/disturbance of

nesting birds. Additionally, trees onsite have the potential to be used as roosting habitat for bat species, including the Western red bat, a state-protected species.

Without avoidance or mitigation, these potential impacts on nesting birds and roosting bats could be considered potentially significant. Implementation of Mitigation Measure BIO-1.1 and Mitigation Measure BIO-1.2 would require conducting pre-construction surveys and establishing buffers to prevent or compensate for impacts on special-status bird species and roosting bat species. Therefore, implementation of Mitigation Measure BIO-1.1 and Mitigation Measure BIO-1.2 would reduce potential impacts to special status species to less-than-significant levels.

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

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure BIO-1.1 ***Nesting Bird Surveys and Active Nest Avoidance.*** Any initial ground disturbance or tree pruning, or removal should take place outside of the active nesting bird season (i.e., February 1–September 30), when feasible, to avoid impacts to nesting birds protected under the California Fish and Game Code and Migratory Bird Treaty Act. Should phased construction require tree removal or initial ground disturbance to ruderal areas, a qualified biologist shall conduct a nesting bird survey no more than 15 days prior to each phase of clearing activities. If nesting birds are discovered during preconstruction surveys, the biologist shall identify an appropriate buffer where no clearing, grading, or construction activities with potential to have direct or indirect impacts on the nesting bird(s) are allowed to take place until after the nest is no longer active (e.g., the young birds have fledged), or as otherwise determined by the qualified biologist.

Mitigation Measure BIO-1.2 ***Surveys for Roosting Bats and Avoidance of Bat Roosts.*** Any tree pruning or removal could disturb roosting bats, should they be present in any of the trees located within or immediately adjacent to the project site. To avoid potential impact to maternity bat roosts, pruning or removal of trees should occur outside of the period between April 1 and September 30, if feasible. If pruning or removal of mature trees is to occur between April 1 and September 30, a qualified biologist shall conduct a preconstruction survey in search of day-roosting bats, dead carcasses, fecal matter, or staining of guano within 30 days of construction. If no evidence is found, tree pruning, or removal can commence without harm to bats. Should the preconstruction survey show evidence of nonbreeding day-roosts for bats, the bats can be humanely evicted via two-stage

removal of trees, under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs. If a maternity colony is detected, the biologist shall identify an appropriate buffer (50–100 feet) where no clearing, grading, or construction activities with potential to have direct or indirect impacts on the roosting bat(s) are allowed to take place. Construction activities, including tree pruning or removal, can commence once the roost is deemed no longer active by the qualified biologist.

Level of Significance With Mitigation: Less Than Significant Impact (refer to Mitigation Measures BIO-1.1 and BIO-1.2)

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

Habitat values of the project site have been diminished due to extensive disturbance of the site for agricultural operations. No riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulation by the CDFW or USFWS occur in the project site. Designated critical habitat, sensitive natural communities, and other sensitive habitats are absent from the project site and adjacent lands. Therefore, the implementation of the proposed project would have a less-than-significant impact on riparian habitat or any other sensitive natural community in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.

Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.

Level of Significance Without Mitigation: Less Than Significant Impact

c. Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no records of wetlands or natural drainage features within the project site. Man-made agricultural ditches within the project site would not be considered jurisdictional Waters of the United States. No potentially protected drainage features, wetlands, or riparian areas were observed on the project site. Therefore, implementation of the proposed project would have a less-than-significant impact on federally protected wetlands.

Impact BIO-3: The project would not 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.

Level of Significance Without Mitigation: Less Than Significant Impact

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another, in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

There is no evidence that the plant communities or features of the project site support a wildlife movement corridor or wildlife nursery site. The project site is heavily impacted by human activity (i.e. ongoing agricultural activity) so overall use by wildlife is low. The wildlife species that occur in the project vicinity are adapted to the urban-wildland interface. The noise, vibration, light, dust, or human disturbance within construction areas would only temporarily deter wildlife from using areas in the immediate vicinity of construction activities. The proposed project would not place any permanent barriers within any known wildlife movement corridors or interfere with habitat connectivity.

The trees present onsite and in the vicinity of the project site could provide suitable nesting habitat for a variety of native and migratory bird species. Implementation of Mitigation Measure BIO-1 prior to the issuance of any grading permits would ensure that take of these species is avoided and that the impact of the proposed project on nesting birds would be less than significant.

> **Impact BIO-4:** The project would interfere 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.
>
> **Level of Significance Without Mitigation:** Potentially Significant Impact
>
> **Mitigation Measures:** Refer to Mitigation Measure BIO-1.1.
>
> **Level of Significance With Mitigation:** Less Than Significant Impact

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would not conflict with any local policies or ordinances protecting biological resources, including General Plan policies outlined in Table 4.4.C. Therefore, implementation of the proposed project would not conflict with any local policies or ordinances, and a less-than-significant impact would occur.

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

Level of Significance Without Mitigation: Less Than Significant Impact

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The PG&E San Joaquin Valley Operation and Maintenance (O&M) Habitat Conservation Plan (HCP) was approved in 2007 and covers portions of nine counties, including Fresno County and the City of Fresno. This HCP covers PG&E activities which occur as a result of ongoing O&M that would have an adverse impact on any of the 65 covered species and provides incidental take coverage from the USFWS and CDFW. The project site is not located within the covered area of any other HCP, Natural Community Conservation Plan, or other approved local, regional, or State HCP.

The project would not conflict with the provisions of the PG&E HCP. The proposed project would have a less than significant impact to the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Level of Significance Without Mitigation: Less Than Significant Impact

4.4.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it – in combination with other projects – would contribute to a significant cumulative impact related to biological resources. The cumulative impact analysis for biological resources considers the larger-context of future development of Fresno County as envisioned by the General Plan and relied upon the projections of the General Plan and General Plan EIR. Cumulative impacts on biological resources would be those impacts that result from incremental changes that degrade habitat or affect other biological resources within the County.

As development projects occur in agricultural land and undeveloped lands in the County, the availability of suitable habitat for special-status species could be affected, and a potentially significant cumulative impact would occur. The project site is heavily impacted by human activity (agricultural operations) and as such, does not represent suitable habitat for special-status plant species. However, existing trees on the project site could potentially provide limited nesting and roosting habitat for special-status bird and bat species, and as such, construction-related disturbance around potential nesting and roosting sites would be a significant impact. Implementation of Mitigation Measured BIO-1.1 and BIO-1.2 would reduce impacts on nesting birds and roosting bats, as described above, and result in a less-than-significant cumulative impact to special-status species by requiring pre-construction surveys, establishing buffers and implementing relocation plans. As such, the project would not contribute to any significant cumulative impacts to special-status species, and cumulative impacts would be less than significant.

Because no riparian habitat or other sensitive natural communities occur in the project site or vicinity, implementation of the proposed project would not combine with development in the vicinity of the project site to result in a cumulatively significant impact to riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.

There is no evidence that the project site supports a wildlife movement corridor. As previously discussed, Mitigation Measure BIO-1.1 would address potential impacts to nesting birds that may use onsite trees as nesting sites. The wildlife species that occur in the vicinity of the study area are adapted to the urban-wildland interface, and would not be significantly affected by construction and operation of the proposed project. Additionally, development within the project site would not place any permanent barriers within any known wildlife movement corridors or interfere with habitat connectivity. Therefore, the cumulative impacts related to wildlife movement and conflicts with wildlife nursery sites would be less than significant.

Implementation of the proposed project would not conflict with policies listed in Table 4.4.C or conflict with any biological resource protection ordinance in the County. As a result, implementation of the proposed project would not conflict with existing policies or ordinances, and a less-than-significant cumulative impact would occur.

The project site is not located within the coverage area for any adopted or proposed HCP or NCCP. Therefore, a less-than-significant cumulative impact would occur related to habitat conservation plans.

Thus, the project would not contribute to any significant cumulative impacts to biological resources, and cumulative impacts to these resources would be less than significant.

Impact BIO-7: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to biological resources.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measure BIO-1.1 and BIO-1.2 above.

Level of Significance With Mitigation: Less Than Significant (refer to Mitigation Measures BIO-1.1 and BIO-1.2)

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4.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section describes the baseline conditions for cultural resources in the project area, identifies potentially significant impacts to cultural resources that may result from project implementation, and recommends mitigation measures to reduce the severity of potentially significant impacts. Cultural resources include prehistoric-era archaeological sites, historic-era archaeological sites, Native American traditional cultural properties, sites of religious and cultural significance, and historical buildings, structures, objects, and sites. Appendix G of the *State CEQA Guidelines* separates the resource topic areas of Cultural Resources and Tribal Cultural Resources. This Environmental Impact Report (EIR) combines these two resource topic areas to provide the reader one condensed location with pertinent information. The analysis in this section is based on the Cultural Resources section of the County of Fresno (County) General Plan EIR[1] and the Cultural Resources Study (Appendix E) prepared by LSA for the proposed project.[2]

4.5.1 Environmental Setting

The project site is approximately 98 acres in size and is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is depicted on the United States Geological Survey (USGS) *Chaney Ranch, California* 7.5-minute topographic quadrangle map in Section 26 of Township 14 South, Range 13 East, Mount Diablo Baseline and Meridian.[3] The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west.

The project site is relatively flat and at an elevation of 290 feet. The nearest natural water source (i.e., Panoche Creek) is approximately 3 miles northwest of the project site. Subsurface sediments at the project site consist of Quaternary marine and nonmarine alluvium, lake, playa, and terrace deposits that date to the Pleistocene and Holocene (i.e., ranging from 2.58 million years ago to the present).

To characterize the setting for cultural resources at the project site, the following tasks were completed: (1) a records search at the Southern San Joaquin Valley Information Center (SSJVIC) to identify prior cultural resource studies and previously recorded cultural resources in the project area and surrounding 0.5-mile area; (2) a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF); (3) additional background research, including a review of aerial photographs and historic-period maps that include the project site; and (4) a pedestrian field survey of the project area to identify potential historical resources within the project area.

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1 County of Fresno. 2000. General Plan Update, Environmental Impact Report, 4.7 Cultural Resources. Website: https://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_EIR/EIR/cultural4-7.pdf (accessed June 2022).

2 LSA Associates, Inc. (LSA). 2021b. Cultural Resources Survey and Study for the Stamoules Pistachio Processing Facility Project in Fresno County, California.

3 United States Geological Survey (USGS). 1971. *Chaney Ranch, California* 7.5-minute topographic quadrangle, Section 26 of Township 14 South, Range 13 East, Mount Diablo Baseline and Meridian. Published 1955, photorevised 1971.

4.5.1.1 Record Research

A records search of the project site and a 0.5-mile search radius was conducted on September 7, 2021 by LSA staff members at the SSJVIC of the California Historical Resources Information System at California State University, Bakersfield (SSJVIC Records Search File No. 21-315). Background research also included a review of the following State and federal inventories:

- Built Environment Resources Directory (BERD)[4]
- California Historical Landmarks[5]
- California Points of Historical Interest[6]
- California Inventory of Historic Resources[7]

The records search results indicated that while no previous cultural resource studies had included the project site, one previous study (an archaeological survey) had included an area within a 0.5-mile radius of the project site. No cultural resources had been previously recorded in the project site. One cultural resource (P-10-005888, Panoche Road) had been previously recorded within a 0.5-mile radius of the project site. No resources listed in the BERD are present within the project site.

4.5.1.2 Native American Heritage Commission

LSA submitted a request to the Native American Heritage Commission (NAHC) to review the SLF for the presence of Native American cultural resources that might be impacted by the proposed project. The NAHC maintains the SLF database and is the official State repository of Native American sacred-site location records in California. Andrew Green, NAHC Cultural Resources Analyst, responded to the SLF search request on September 24, 2021, stating that the results were negative and that no Native American cultural resources were known in the area. The NAHC also provided a suggested list of Native American individuals to contact for information regarding the project site.

4.5.1.3 Aerial Photographs and Historic Maps

Additional background research included a review of aerial photographs and historic-period maps that include the project site.[8] The purpose of this review was to assess the potential for historic-period archaeological deposits in the project site. The oldest available aerial photograph that included the project site was dated back to 1971, at which time the project site was undeveloped. A photograph dating to 1981 showed the project site being used for agricultural purposes at this time. The earliest available topographic quadrangle reviewed by LSA dated to 1922 and depicted no buildings on the project site itself but did depict Panoche Road to the south and unnamed roads

4 California Office of Historic Preservation (OHP). Built Environment Resources Directory (BERD). n.d. Website: https://ohp.parks.ca.gov/?page_id=30338 (accessed October 22, 2021).

5 California Office of Historic Preservation (OHP). 1996. California Historical Landmarks. California Department of Parks and Recreation, Sacramento.

6 California Office of Historic Preservation (OHP). 1992. California Points of Historical Interest. California Department of Parks and Recreation, Sacramento.

7 California Office of Historic Preservation (OHP). 1976. California Inventory of Historic Resources. California Department of Parks and Recreation, Sacramento.

8 National Environmental Title Research. n.d. Historic Aerials. Website: http://www.historicaerials.com (accessed October 22, 2021).

within the project site. The unnamed roads were no longer present in the project site on the 1956 map reviewed by LSA staff or any more recent maps. None of the maps reviewed depicted any buildings within the project site.

4.5.1.4 Field Survey

On September 28, 2021, LSA staff conducted a pedestrian field survey of the project site. Approximately 75 percent of the project site was identified as being actively used for crop cultivation, while the remaining 25 percent of the project site was not in active agricultural use. Fallow agricultural land and the active agricultural land at the project site was spot-checked where possible without damaging crops. The types of sediments observed at the project site during the field survey included fine grain dirt with a mix of round and jagged stones, gravel with jagged gray stones, hard-packed brown silt with mixed stones, and fine silt. The field survey conducted at the project site identified no archaeological resources or human remains within the site.

4.5.2 Regulatory Setting

4.5.2.1 Federal Regulations

National Historic Preservation Act. The National Historic Preservation Act of 1966 (NHPA) is the most concise and effective federal law dealing with historic preservation. While federal preservation law does not apply to the proposed project, applicable State and local requirements have been derived from this legislation. The NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our cultural heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (known as Section 106) that pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. In addition, the NHPA authorizes the Secretary of the Interior to establish a National Register of Historic Places (National Register). The National Register is an inventory of districts, sites, buildings, structures, and objects significant at a national, State, or local level in American history, architecture, archaeology, engineering, and culture. The National Register is wholly maintained by the National Park Service, the Advisory Council on Historic Preservation, and the State Office of Historic Preservation (SHPO) and grants-in-aid programs.

4.5.2.2 State Regulations

California Register of Historical Resources. The California Register of Historical Resources (California Register) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Important cultural resources can be listed in the California Register through a number of methods, and listing requires approval from the State Historical Resources Commission. Properties can be nominated to the California Register by local governments, private organizations, or citizens. State Historical Landmarks and National Register-listed properties gain automatic listing in the California Register. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register. In order for a cultural resource to be significant, or in other words eligible, for listing in the California Register, it must reflect one or more of the following criteria (Public Resources Code [PRC] 5024.1c):

- **Criterion 1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States

- **Criterion 2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history

- **Criterion 3 (Architecture):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values

- **Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation

California Environmental Quality Act (CEQA). CEQA requires that public agencies assess the effects on historical resources of public or private projects that the agencies finance or approve. Historical resources are defined as buildings, sites, structures, objects, areas, places, records, or manuscripts that the Lead Agency determines to have historical significance, including architectural, archaeological, cultural, or scientific significance. CEQA requires that if a project results in an effect that may cause a substantial adverse change in the significance of a historical resource, alternative plans or mitigation measures must be considered.

However, only significant historical resources need to be addressed. Therefore, before the assessment of effects or development of mitigation measures, the significance of cultural resources must be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

1. Identify potential historical resources.
2. Evaluate the eligibility of historical resources.
3. Evaluate the effects of the project on all eligible historical resources.

In addition, properties that are listed in or eligible for listing in the National Register are considered eligible for listing in the California Register and thus are significant historical resources for the purposes of CEQA (PRC Section 5024.1[d][1]).

According to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant impact on the environment (*State CEQA Guidelines* 15064.5[b]). CEQA also states that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of an historical resource or its immediate surroundings such that the significance of the resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or materially and adversely alter the physical characteristics of a historical resource that convey its historical significance and qualify or justify its eligibility for inclusion in the California Register or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

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

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register (PRC Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).

2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1 (g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript that a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the Lead Agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the Lead Agency to be "historically significant" if the resource meets the criteria for listing on the California Register (PRC Section 5024.1, Title 14 CCR, Section 4852).

   These conditions are related to the eligibility criteria for inclusion in the California Register (PRC Sections 5020.1[k], 5024.1, 5024.1[g]). A cultural resource may be eligible for inclusion in the California Register if it:

   - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
   - Is associated with the lives of persons important in our past;
   - Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
   - Has yielded, or may be likely to yield, information important in prehistory or history.

   The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, is not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a Lead Agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

   A Lead Agency must consider a resource that has been listed in, or determined to be eligible for listing in the California Register (Category 1) as an historical resource for CEQA purposes. In general, a resource that meets any of the other three criteria listed in *State CEQA Guidelines*

Section 15064.5(a) is also considered to be a historical resource unless "the preponderance of evidence demonstrates that the resource is not historically or culturally significant."

State Health and Safety Code. The discovery of human remains is regulated according to California Health and Safety Code Section 7050.5, which states that if human remains are encountered, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be precontact, the Coroner will notify the NAHC, which will determine and notify the Most Likely Descendant (MLD). With the permission of the landowner or his or her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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

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

Assembly Bill 52. Assembly Bill (AB) 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a Notice of Preparation (NOP) for an EIR or Notice of Intent (NOI) to adopt a Negative or Mitigated Negative Declaration on or after July 1, 2015. AB 52 adds tribal cultural resources (TCRs) to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register, or included in a local register of historical resources. A Native American tribe or the Lead Agency, supported by substantial evidence, may choose at its discretion

to treat a resource as a TCR. AB 52 also mandates Lead Agencies to consult with Native American tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

4.5.2.3 Local Regulations

County of Fresno General Plan. The General Plan includes objectives and policies that work to identify and preserve Fresno County's historic and cultural resources that reflect important cultural, social, economic, and architectural features. Table 4.5.A shows General Plan policies related to cultural and tribal cultural resources applicable to the proposed project.

Table 4.5.A: Fresno County General Plan Policies Related to Cultural Resources and Tribal Cultural Resources

Policy/Action Item No.	Policy/Action Item
Open Space and Conservation Element	
Policy OS-J.1	The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archaeological, paleontological, and cultural sites and their contributing environment from damage, destruction, and abuse to the maximum extent feasible. Project-level mitigation shall include accurate site surveys, consideration of project alternatives to preserve archaeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable
Policy OS-J.3	The County shall solicit the views of the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance

Source: General Plan (County of Fresno 2000).

4.5.3 Impacts and Mitigation Measures

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

4.5.3.1 Significance Criteria

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

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries;

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

4.5.3.2 Project Impacts

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

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

The Cultural Resources Study conducted at the project site did not identify historical resources on or in the vicinity of the project site. However, development of the project site could result in impacts to unknown historical resources that may be encountered during ground-disturbing activities. The implementation of Mitigation Measure CUL-1 would reduce potential impacts to unknown historical resources to a less than significant level by ensuring that if found, such resources are appropriately avoided, treated, and recorded, as appropriate and consistent with current professional practices.

Impact CUL-1: The project would cause substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure CUL-1

If previously unknown resources are encountered before or during grading activities, construction shall stop within 50 feet 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 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 *State CEQA Guidelines*.

If the resources are determined to be unique archaeological resources as defined under Section 15064.5(c)(1) of the *State CEQA Guidelines*, measures shall be identified by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications

Standards for Archaeology and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of green space, parks, or open space in undeveloped areas of the project site, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the protection measures. Any historical artifacts recovered as a result of mitigation shall be provided to a Lead Agency-approved institution or person who is capable of providing long-term preservation to allow future scientific study. A report of findings shall also be submitted to the Southern San Joaquin Valley Information Center.

Level of Significance With Mitigation: Less Than Significant

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Pursuant to *State CEQA Guidelines* Section 15064.5(c)(1), "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource." Those archaeological sites that do not qualify as historical resources shall be assessed to determine if they qualify as "unique archaeological resources" pursuant to California PRC Section 21083.2. The record search and field survey conducted at the project site did not identify archaeological resources. However, any archaeological resources found during project construction shall be treated by the County—in consultation with a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology—in accordance with Mitigation Measure CUL-1 as identified above in Section a. With implementation of measures under Mitigation Measure CUL-1, impacts to archaeological resources would be less than significant.

Impact CUL-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measure CUL-1.

Level of Significance With Mitigation: Less Than Significant

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

If human remains are identified during project construction, Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98 shall apply, as appropriate. Implementation of the appropriate procedures required under State law and implementation of Mitigation Measure CUL-3 for the treatment of Native American remains would ensure that descendant communities have

significant input in the treatment and final disposition of human remains that may be encountered at the project site, and this impact would be less than significant.

Impact CUL-3: The project would disturb any human remains, including those interred outside of formal cemeteries.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure CUL-3 In the event that human remains are unearthed during excavation and grading activities of the 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 (MLD) 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 MLDs regarding their recommendations, if applicable, and taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the MLDs all reasonable options regarding their preferences for treatment.

Level of Significance With Mitigation: Less Than Significant

d. Result in a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

The State requires Lead Agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting traditional TCRs through the *State CEQA Guidelines*. Pursuant to PRC Section 21080.3.1, the Lead Agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are either on or eligible for inclusion in the California Register or local historic register, or the Lead Agency, at its discretion, and supported by substantial evidence, chooses to treat the resources as a TCR (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias. Fresno County has a number of Rancherias such as Table Mountain Rancheria, Millerton Rancheria, Big Sandy Rancheria, Cold Springs Rancheria, and Squaw Valley Rancheria.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process.

On September 17, 2021, pursuant to AB 52, the County provided a formal invitation to Native American tribes culturally or traditionally affiliated with the project site for consultation. The Santa Rosa Rancheria Tachi Yokut Tribe, the Picayune Rancheria of the Chukchansi Indians, the Table Mountain Rancheria, and the Dumna Wo-Wah Tribal Government were formally notified regarding AB 52 consultation. On October 5, 2021, the Table Mountain Rancheria provided a response, requesting a copy of any cultural resource report prepared for the project, as well as requesting a meeting with the County to discuss the proposed project. No other requests for consultation were received within the 30-day period, and as a result, AB 52 requirements have been fulfilled. AB 52 consultation invitation and response letters are included in Appendix F of this EIR. Additionally, If any artifacts are inadvertently discovered during ground-disturbing activities, existing federal, State, and local laws and regulations would require construction activities to cease until such artifacts are properly examined and determined not to be of significance by a qualified cultural resource professional. In addition, Mitigation Measures CUL-1 and CUL-3 included above would reduce potential impacts to unknown cultural resources to a less than significant level.

Impact CUL-4: The project would result in a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measures CUL-1 and CUL-3.

Level of Significance With Mitigation: Less Than Significant

4.5.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if, in combination with other projects, it would contribute to a significant cumulative impact related to cultural resources. The cumulative impact area for cultural resources is Fresno County.

The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. Development within the project site could result in impacts to unknown historical and archaeological resources, including TCRs, in Fresno County. In compliance with Mitigation Measure CUL-1, if previously unknown resources are encountered during project construction, a qualified historical resources specialist or archaeologist would be consulted to assess the resources found and provide recommendations for further study or mitigation, as applicable. In the case that human remains are found upon development of the project site, implementation of Mitigation Measure CUL-3 would ensure compliance with Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98, as applicable, to reduce potential impacts to interred human remains to a less than significant level. As a result, the project would not have a cumulatively significant impact on cultural and tribal cultural resources.

Impact CUL-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to cultural and tribal cultural resources.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measures CUL-1 and CUL-3.

Level of Significance With Mitigation: Less Than Significant

4.6 ENERGY

This section discusses energy usage resulting from the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The analysis in this section is based on the California Emissions Estimator Model, Version 2022.1 (CalEEMod) prepared for the proposed project (Appendix B).

4.6.1 Environmental Setting

4.6.1.1 Project Area

The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is within the Pacific Gas and Electric's (PG&E) service area that spans approximately 70,000 square miles from Eureka in the north to Bakersfield in the south and from the Pacific Ocean in the west to the Sierra Nevada Mountains in the east.

4.6.1.2 Energy Resources

Electricity. Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, or nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).[1]

According to the most recent data available, in 2022, California's electricity was generated primarily by natural gas (47.46 percent), coal (0.1 percent), large hydroelectric (7.2 percent), nuclear (8.7 percent), and renewable sources (52.2 percent). Total electric generation in California in 2022 was 287,220 gigawatt-hours (GWh), up 3.4 percent, or 9,456GWh, from 2021.[2]

The project site receives its electricity from PG&E. According to the California Energy Commission (CEC), total electricity consumption in the PG&E service area in 2022 was 104,695.0 GWh (35,245.7 GWh for the residential sector and 69,449.3 GWh for the nonresidential sector).[3] Total electricity consumption in Fresno County in 2022 was 8,384.4 GWh (3,170.5 GWh for the residential sector and 5,213.9 for the nonresidential sector).[4]

Natural Gas. Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over many years. Natural gas is a combustible mixture of hydrocarbon compounds

1 United States Energy Information Administration. 2022a. Electricity Explained. Website: https://www.eia.gov/energyexplained/electricity/ (accessed October 2023).

2 California Energy Commission (CEC). 2022. 2022 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation (accessed October 2023).

3 California Energy Commission (CEC). 2021b. Electricity Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed October 2023).

4 California Energy Commission (CEC). 2021c. Electricity Consumption by County. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed October 2023).

(primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).[5]

According to the United States Energy Information Administration, in 2022, natural gas consumed in California was used for electricity generation (31.2 percent), residential uses (21.0 percent), industrial uses (31.7 percent), commercial uses (12.0 percent), and transportation uses (1.4 percent).[6]

PG&E is the natural gas service provider for the project site. According to the CEC, total natural gas consumption in the PG&E service area in 2022 was 4,449.2 million therms (1,866.2 million therms for the residential sector and 2,583.0 million therms for the nonresidential sector).[7] Total natural gas consumption in Fresno County in 2022 was 319.4 million therms (108.4 million therms for the residential sector and 211.0 million therms for the nonresidential sector).[8]

Fuel. Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil and gasoline.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, total gasoline consumption in California was 319,514 thousand barrels (13.4 billion gallons) or 1,613.5 trillion British thermal units (BTU) in 2021.[9] Of the total gasoline consumption, 302,881 thousand barrels (12.7 billion gallons) or 1,529.5 trillion BTU were consumed for transportation.[10] Based on fuel consumption obtained from the California Emission Factor Model, Version 2021 (EMFAC2021), approximately 372 million gallons of gasoline and approximately 157.6 million gallons of diesel will be consumed from vehicle trips in Fresno County in 2023.

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5 United States Energy Information Administration. 2022b. Natural Gas Explained, Use of Natural Gas. Website: https://www.eia.gov/energyexplained/natural-gas/use-of-natural-gas.php (accessed October 2023).

6 United States Energy Information Administration. 2023. Natural Gas Consumption by End Use (Million Cubic Feet). Website: https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm (accessed October 2023).

7 California Energy Commission (CEC). 2021d. Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed October 2023).

8 California Energy Commission (CEC). 2021e. Gas Consumption by County. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx (accessed October 2023).

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

10 United States Energy Information Administration. 2021. California State Profile and Energy Estimates, Table F3: Motor gasoline consumption, price, and expenditure estimates, 2021. Website: eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed October 2023).

4.6.2 Regulatory Setting

4.6.2.1 Federal Regulations

Energy Policy Act of 2005. The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards. On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

4.6.2.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs)

and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted reports include the 2021 Integrated Energy Policy Report[11] and the 2022 Integrated Energy Policy Report Update.[12] The Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standards. SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[13]

Title 24, California Building Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2019 CBC went into effect on January 1, 2020. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24. Title 24 standards are updated every 3 years and was most recently updated in 2019 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2020. The next set of standards will be adopted in 2022 and apply to projects seeking building permits on or after January 1, 2023.

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11 California Energy Commission (CEC). 2021. 2021 Integrated Energy Policy Report. Docket Number: 21-IEPR-01.

12 California Energy Commission (CEC). 2022. 2020 Integrated Energy Policy Report Update. Docket Number: 22-IEPR-01.

13 California Public Utilities Commission (CPUC). 2020. Renewables Portfolio Standard (RPS) Program. Website: https://www.cpuc.ca.gov/rps/ (accessed October 2023).

California Green Building Standards Code (CALGreen Code). In 2010, the California Building Standards Commission adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2019 CALGreen Code standards that became effective January 1, 2020. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan. On September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

4.6.2.3 Local Regulations

There are no applicable local regulations related to energy for the proposed project.

4.6.3 Impacts and Mitigation Measures

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

4.6.3.1 Significance Criteria

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

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

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

4.6.3.2 Project Impacts

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

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction Energy Consumption. Implementation of the proposed project would construct a pistachio hulling, processing, and packing facility on the project site. The proposed project would be implemented in four phases over a 44-month period, and each phase would include the construction and addition of buildings, working areas, and equipment to increase the capacity of the project site. Construction phases are expected to occur consecutively; therefore, to be conservative, this analysis evaluates construction emissions as a whole and not per phase. The proposed project would require grading, site preparation, and building activities during construction. Construction of the proposed project would require energy for the manufacture and transportation of building materials, preparation of the site for grading activities, and building construction. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities.

Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and haul trucks would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation use depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Gasoline and diesel usage estimates associated with the proposed project are shown in Table 4.6.A.

Table 4.6.A: Estimated Energy Use during Project Construction

Energy Type	Total Energy Consumption (gallons)	Percentage of Increase Countywide
Diesel Fuel	179,467.2	0.1
Gasoline	90,863.2	0.02

Source: Compiled by LSA (2023).

As indicated in Table 4.6.A, the project would consume approximately 179,467.2 gallons of diesel fuel and approximately 90,863.2 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 372 million gallons of gasoline and approximately

157.6 million gallons of diesel will be consumed from vehicle trips in Fresno County in 2023. Therefore, construction of the proposed project would increase the annual construction generated fuel use in Fresno County by approximately 0.1 percent for diesel fuel usage and by less than 0.02 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Fresno County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy because gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operational Energy Consumption. Operational energy use is typically associated with electricity consumption and fuel used for vehicle trips associated with a project. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, as well as the operation of special processing equipment, including a conveyor system, pistachio pre-cleaning equipment, and gas-powered dryers. It is estimated that the proposed project processing equipment would generate a maximum of 8.94 MW per day of electricity and 8.90 million standard cubic feet per day (MMSCFD) of natural gas for dryers and 2.34 MMSCFD of natural gas for generators, which was included in CalEEMod. The proposed project would also include operational equipment such as: (a) 3 Forsburgs Gravity Decks, each consisting of a 1 horsepower (HP) motor, a 3 HP motor, and a 60 HP motor with a 0.8-load factor; (b) 2 LMC Scalpers, each consisting of a 1 HP motor and a 5 HP motor with a 0.8-load factor; (c) 10 Magnuson Peeler machines, each consisting of a 0.75 HP motor, a 2 HP motor, a 7.5 HP motor, a 15 HP motor and a 20 HP motor with a 0.8-load factor; (d) 10 Sukup Dryers, each consisting of a 1 HP motor, a 2 HP motor, a 10 HP motor, and a 4x40 HP motor with a 0.8 load factor; and (e) 10 forklifts, 10 skid steer loaders, and 10 rubber-tired loaders. All off-road equipment and pre-cleaning special machinery are assumed to be electric; however, industrial dryers would utilize natural gas. The harvest season is 45 days long during which the machinery would be running 18 hours a day for a total of 810 hours.

The proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle and truck trips. Fuel use associated with vehicle and truck trips generated by the proposed project was calculated based on the project's trip generation estimate, as discussed in Section 4.13.3.2(b) of Section 4.13, Transportation, the proposed project would generate approximately 249 average daily trips, including 43 employee trips, 4 service vehicle trips, 190 raw material hauling truck trips, and 12 dry waste hauling truck trips. The amount of operational fuel use was estimated using the California Air Resources Board (CARB) EMFAC2021 model, which provided projections for typical daily fuel usage in Fresno County.

Electricity and natural gas usage estimates associated with the proposed project are shown in Table 4.6.B.

Table 4.6.B: Estimated Annual Energy Use for Project Operation

Energy Type	Annual Energy Consumption
Electricity Consumption (kWh/yr)	1,296,720.0
Natural Gas Consumption (therms/yr)	121,390.0
Diesel Fuel (total gallons)	432,282.9
Gasoline (total gallons)	3,635.5

Source: Compiled by LSA (2023).
[1] Kilowatt-hour
[2] 1 therm= 100,000 British Thermal Units (BTU)
kWh/yr = kilowatt-hours per year
terms/yr = therms per year

As discussed previously in Section 4.6.1.2 above, total electricity demand for Fresno County in 2022 was 8,384.4 GWh, or approximately 8,384,408,687 kWh. As shown in Table 4.6.B, the estimated potential increase in electricity demand associated with the operation of the proposed project is 1,296,720 kWh per year. Therefore, operation of the proposed project would increase the annual electricity consumption in Fresno County by approximately 0.02 percent. As such, the proposed project's share of cumulative electricity consumption would be negligible.

Total natural gas consumption in Fresno County in 2022 was 319.4 million therms. As shown in Table 4.6.B, the estimated potential increase in natural gas demand associated with the proposed project is 121,390 therms per year. Therefore, operation of the proposed project would increase the annual natural gas consumption in Fresno County by approximately 0.04 percent. The proposed project's share of cumulative consumption of natural gas in the county would be negligible.

Once operational, the proposed project would consume approximately 3,635.5 gallons of gasoline and approximately 432,282.9 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 372 million gallons of gasoline and approximately 157.6 million gallons of diesel will be consumed from vehicle trips in Fresno County in 2023. As such, project operation would increase the annual gasoline fuel usage in Fresno County by approximately less than 0.01 percent and would increase diesel fuel use by approximately 0.3 percent. Therefore, the proposed project's share of cumulative fuel consumption would have a negligible effect on local and regional energy supplies.

Electrical, gasoline and diesel fuel, and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State plan for renewable energy or energy efficiency. Implementation of the proposed project would be required to adhere to all federal and State requirements for energy efficiency. With adherence to State plans for renewable energy or energy efficiency, impacts related to electricity and natural gas use would be less than significant.

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

Level of Significance Without Mitigation: Less Than Significant

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would be constructed using energy-efficient modern building materials and construction practices, and the proposed project also would use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (CCR Title 20, Sections 1601 through 1608). The proposed project would also be required to comply with the CALGreen Code (Title 24, Part 11), which encourages energy efficiency in new developments. Since the proposed project would comply with applicable energy efficiency regulations, the proposed project would not conflict with State plans for energy efficiency. Therefore, the proposed project would have a less than significant impact.

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

Level of Significance Without Mitigation: Less Than Significant

4.6.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to energy.

As discussed above, project construction activities would increase the annual gasoline fuel usage in Fresno County by approximately 0.02 percent and would increase diesel fuel use in the county by approximately 0.1 percent. Therefore, project construction would have a negligible cumulative effect on local and regional energy supplies.

As discussed previously, the estimated potential increase in electricity demand associated with the operation of the proposed project is 1,296,720 kWh per year. Therefore, operation of the proposed project would increase the annual electricity consumption in Fresno County by approximately 0.02 percent. As such, the proposed project's share of cumulative electricity consumption would be negligible. The estimated potential increase in natural gas demand associated with the proposed project is 121,390 therms per year. Therefore, operation of the proposed project would increase the annual natural gas consumption in Fresno County by approximately 0.04 percent. The proposed project's share of cumulative consumption of natural gas in the county would be negligible. In addition, once operational, the proposed project would consume approximately 3,635.5 gallons of gasoline and approximately 432,282.9 gallons of diesel fuel per year. As such, project operation would increase the annual gasoline fuel usage in Fresno County by approximately less than 0.01 percent and would increase diesel fuel use by approximately 0.3 percent. Therefore, the proposed project's share of cumulative fuel consumption would have a negligible effect on local and regional energy supplies.

The proposed project would comply with Appliance Efficiency Regulations (CCR Title 20, Sections 1601 through 1608) and the CALGreen Code (Title 24, Part 11), as well as other federal and State policies related to energy efficiency and conservation and would not conflict with or obstruct plans for renewable energy or energy efficiency.

Therefore, implementation of the proposed project would result in a less than significant cumulative impact related to the inefficient, wasteful, and unnecessary consumption of energy.

Impact EN-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to energy.

Level of Significance Without Mitigation: Less Than Significant

4.7 GEOLOGY AND SOILS

This section provides a discussion of the existing geologic and soils environment and an analysis of potential impacts from implementation of the proposed project. This section also addresses the potential for structural damage due to the local geology underlying the proposed project site, as well as slope stability, ground settlement, soil conditions, grading, and regional seismic conditions. The findings and information in this section summarize the results of the County of Fresno (County) General Plan Environmental Impact Report (EIR) and Background Report[1].

4.7.1 Environmental Setting

4.7.1.1 Project Area

The project site is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is currently vacant and used in agricultural operations. The project site is relatively flat and at an elevation of 290 feet above mean sea level (amsl). The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site. Pilibos Ranch is located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project.

4.7.1.2 Regional Geologic Setting

The project site is located within the Great Valley Geomorphic Province, an asymmetrical structural trough containing Mesozoic and Cenozoic sediments to an approximate depth of 30,000 feet. The Great Valley is comprised of two large valleys: the southern San Joaquin Valley and the northern Sacramento Valley. The project site is in the San Joaquin Valley, which represents the lower two-thirds of the Great Valley Province, and is surrounded by the Sierra Nevada Mountains to the east, the Coast Ranges to the west, the Tehachapi and San Emigdio Mountains to the south, and the Sacramento Valley and Sacramento-San Joaquin Delta to the north.

Western Fresno County is underlain by Tertiary marine deposits, Quaternary non-marine alluvial fan sedimentary deposits, and Pleistocene non-marine sedimentary deposits. Subsurface sediments of the project site consist of Quaternary marine and nonmarine alluvium, lake, playa, and terrace deposits that date to the Pleistocene and Holocene. The Tertiary Period extends from 66 million years ago (mya) to 2.6 mya. The Quaternary Period extends from the present to 1.8 mya, and the Pleistocene Epoch extends from 11,700 years ago to 2.6 mya. The Holocene Epoch is the current geological epoch, and it extends from approximately 11,700 years ago to the present. [2]

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1 County of Fresno. 2000. The 2000 Fresno County General Plan. Website: https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps (accessed May 2023).

2 County of Fresno. 2000. Background Report, Section 7.4, Review and Description of Soils. pp. 7-10. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/8398-background_report_june04.pdf (accessed October 2023).

4.7.1.3 Faulting

No active faults are mapped within the project site. Active faults are those showing evidence of surface displacement within the last 11,000 years.[3] The nearest active faults to the project site are the Ortigalita Fault (located 20 miles northwest of the project site), the Nunez Fault (located 31 miles southeast of the project site), and the San Andreas Fault (located 33 miles southwest of the project site).

4.7.1.4 Geologic Hazards

Liquefaction. Liquefaction is a process whereby strong earthquake shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid. This subsurface process can lead to near-surface or surface ground failure that can result in property damage and structural failure. If surface ground failure does occur, it is usually expressed as lateral spreading, flow failures, ground oscillation, and/or general loss of bearing strength. Sand boils (injections of fluidized sediment) can commonly accompany these different types of failure. Areas of the San Joaquin Valley in Fresno County are not considered conducive to liquefaction due to soil types—either too coarse or too high in clay content.

Seismic Ground Settlement. Ground shaking caused by earthquakes can cause unconsolidated sediments to settle, or differential settlement. Differential settlement is a less stable alignment of the individual minerals that can cause significant structural damage. This can occur with rapidly deposited soils or improper structure foundations.

Landslides. Landslide is a general term used to describe the downslope movement of a rock, soil, or earth mass. Landslides can occur when gravitational forces and other shear stresses exceed the earth's resistance to shearing. Landslides typically occur in areas that experience ground shaking, are typically wet, and/or have steep slopes.

Erosion. Erosion is the process in which earth materials are worn away and transported. Erosion naturally occurs by wind and flowing water and can be accelerated by humans and ground disturbance when effective erosion control measures are not in use. Soil carried off construction sites or bare land by wind and water is a common example of erosion. When sediments are carried by water, the water can become cloudy or turbid and can cause biological harm such as clogged fish gills, reduced spawning habitats, lower survival rates of young aquatic organisms, smothered bottom-dwelling organisms, and suppressed aquatic vegetation growth.

Ground Subsidence. Subsidence is the gradual settling or sudden sinking of surface soils due to movement of subsurface earth materials. A major cause of ground subsidence is the excessive withdrawal of groundwater and the withdrawal of petroleum.

[3] California Department of Conservation (DOC). n.d. Alquist-Priolo Earthquake Fault Zones. Website: www.conservation.ca.gov/cgs/alquist-priolo (accessed June 2022).

Ground subsidence in the region was mapped as less than 1 foot by the United States Geological Survey (USGS) in 1999. However, the San Joaquin Valley has been subject to subsidence of 20+ feet over the past 50 years.[4]

Expansive Soils. Expansive soils contain substantial amounts of clay minerals, such as smectite, that absorb and swell when wet and shrink when dried.[5] Expansive soils shrink or swell as the moisture content decreases or increases; the shrinking or swelling can shift, crack, or break structures built on such soils.

4.7.2 Regulatory Setting

4.7.2.1 Federal Regulations

Earthquake Hazards Reduction Act. The Earthquake Hazards Reduction Act was enacted in 1997 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

The NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

4.7.2.2 State Regulations

Alquist-Priolo Earthquake Fault Zoning. The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code [PRC] Sections 2621 et seq.) requires the California Geologic Survey to compile maps of traces of active faults and requires a State geologist to delineate earthquake fault zones along faults that are "sufficiently active" and "well defined." The Act requires disclosure in real estate transactions and requires cities and counties to withhold development permits for a site in an earthquake fault zone until geologic investigations demonstrate that the site is not threatened by surface displacements from future faulting. An active fault is one showing expression of surface rupture within the last 11,000 years. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. Single-family wood-framed or steel-framed dwellings up to two stories high and not part of a development of four or more dwelling units is the only exemption to this Act.

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4 United States Geological Survey (USGS). 2018. Land Subsidence in the San Joaquin Valley. October 17. Website: www.usgs.gov/centers/ca-water-ls/science/land-subsidence-san-joaquin-valley?qt-science_center_objects=0#qt-science_center_objects (accessed March 2022).

5 Osman, K.T. 2018. Expansive Soils. In: Management of Soil Problems. Website: www.doi.org/10.1007/978-3-319-75527-4_6 (accessed March 2022).

Seismic Hazard Mapping Act. The Seismic Hazard Mapping Act (SHMA) was adopted by the State in 1990 in response to the Loma Prieta Earthquake in 1989. This Act protects the public from the effects of non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the SHMA is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey (CGS) has been required under SHMA to prepare "seismic hazard zone" maps available to local governments. These maps identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. Buildings designed for human occupancy proposed to be built within a "seismic hazard zone" require a geotechnical investigation and mitigation measures to be implemented. SHMA requires responsible agencies to only approve projects within seismic hazard zones following a site-specific investigation to determine if the hazard is present, and if so, the inclusion of appropriate mitigation(s). Reports must be stamped by a Registered Civil Engineer or Certified Engineering Geologist with a specialty in seismic hazard evaluation. In addition, the SHMA requires real estate sellers and agents to provide full disclosure if the property is within a seismic hazard zone at the time of sale. Single-family dwellings up to two stories high and part of a development of no more than three units are the only exemption to this Act.

Uniform Building Code. The Uniform Building Code (UBC) was first enacted by the Pacific Coast Building Officials (now International Conference of Building Officials (ICBO)) in Whittier, California, on October 18-21, 1927. This code not only addressed housing habitability issues, it also regulated the construction of all buildings. Included in some of the initial requirements of the 1927 UBC were building setbacks, minimum exiting, and minimum safe structural requirements. Revised editions of UBC were published approximately every 3 years up until 1997, when it was superseded by the International Building Code.

2019 California Building Code (CBC). Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the CBC within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission, and the code is updated every 3 years. The CBC is in Title 24, Part 2, of the California Code of Regulations (CCR). The most recent building standard adopted by the legislature and used throughout the State is the 2019 CBC, which took effect on January 1, 2020. Local jurisdictions may add amendments based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and people by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC's provisions for earthquake safety are based on factors such as occupancy type, the types of soil and rock on site, and the strength of ground motion with a specified probability at the site.

California Health and Safety Code, Sections 17953 to 17955, and CBC Section 1803 (Requirements for Geotechnical Investigations). Requirements for geotechnical investigations for subdivisions requiring tentative and final maps and for structures are in California Health and Safety Code, Sections 17953 to 17955, and in Section 1803 of the CBC. Testing of samples from subsurface investigations is required, such as from borings or test pits. Investigations must be conducted by a registered design professional and involve in situ testing, laboratory testing, or engineering

calculations. Studies must be done as needed to evaluate slope stability, soil strength, position, and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

4.7.2.3 Local Regulations

County of Fresno General Plan. The General Plan contains policies with respect to geologic hazards, with the objective of reducing risks to people and property. Table 4.7.A includes General Plan policies related to geology and soils applicable to the proposed project.

Table 4.7.A: Fresno County General Plan Policies Related to Geology and Soils

Policy/Action Item No.	Policy
Health and Safety Element	
Policy HS-D.3	The County shall require that a soils engineering and geologic-seismic analysis be prepared by a California-registered engineer or engineering geologist prior to permitting development, including public infrastructure projects, in areas prone to geologic or seismic hazards (i.e., fault rupture, groundshaking, lateral spreading, lurchcracking, fault creep, liquefaction, subsidence, settlement, landslides, mudslides, unstable slopes, or avalanche).
Policy HS-D.4	The County shall require all proposed structures, additions to structures, utilities, or public facilities situated within areas subject to geologic-seismic hazards as identified in the soils engineering and geologic-seismic analysis to be sited, designed, and constructed in accordance with applicable provisions of the Uniform Building Code (Title 24 of the California Code of Regulations) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety
Policy HS-D.5	Pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code, Chapter 7.5), the County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones unless the specific provisions of the Act and Title 14 of the California Code of Regulations have been satisfied.
Policy HS-D.8	The County shall require a soils report by a California-registered engineer or engineering geologist for any proposed development, including public infrastructure projects, that requires a County permit and is located in an area containing soils with high “expansive” or “shrink-swell” properties. Development in such areas shall be prohibited unless suitable design and construction measures are incorporated to reduce the potential risks associated with these conditions.
Policy HS-D.9	The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where feasible, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.
Policy HS-D.12	In known or potential landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems, undercutting the bases of slopes, removal of vegetative cover, and steepening of slopes.

Source: General Plan (County of Fresno 2000).

4.7.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to geology and soils that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the

recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.7.3.1 Significance Criteria

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

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
    ii. Strong seismic ground shaking;
    iii. Seismic-related ground failure, including liquefaction; or
    iv. Landslides.

b. Result in substantial soil erosion or the loss of topsoil.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d. Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.7.3.2 Project Impacts

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

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on

other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42;

ii. Strong seismic ground shaking;

iii. Seismic-related ground failure, including liquefaction; or

iv. Landslides.

Fault Rupture. Surface rupture generally occurs along an existing active fault trace. An active fault is one that has ruptured during the Holocene Epoch (i.e., in the last 11,000 years).[6] Areas susceptible to surface fault rupture are delineated by Alquist-Priolo Earthquake Fault Zone mapping performed by the CGS. The project site is not near an Alquist-Priolo Earthquake Fault Zone. In addition, no known active or potentially active faults or fault traces are within the project vicinity. The closest active faults are the Ortigalita Fault (located 20 miles northwest of the project site), the Nunez Fault (located 31 miles southeast of the project site), and the San Andreas Fault (located 33 miles southwest of the project site). Due to the distance of these known faults, the project would not expose people or structures to potential adverse effects, including the risk of loss, injury, or death from the rupture of a known earthquake fault, and the impact would be less than significant.

Seismic Ground Shaking. The General Plan EIR identifies that the project site is located within Seismic Zone 4, as defined by the UBC[7], which has an approximate ground peak acceleration of 0.4g (approximately 3.9 meters per second squared [m/s^2]). As required by State law, the proposed project would be compliant with the CBC (CCR Title 24) and would implement design requirements for construction in Seismic Zone 4, including usage of specific materials and implementation of measures for structural safety of proposed structures. Thus, compliance with CBC requirements would ensure that project design would reduce potential impacts related to seismic ground shaking to a less than significant level.

Seismic-Related Ground Failure. The potential for different types of ground failure to occur during a seismic event is discussed below.

Liquefaction. Soil liquefaction is a phenomenon primarily associated with saturated soil layers close to the ground surface. During ground shaking, these soils lose strength and acquire "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain significant amounts of fines (silt and clay) may also liquefy. Soils at the project site include Cerini clay loam and Ciervo clay.[8] Based on the predicted seismic accelerations, and soil and groundwater conditions typically encountered in the region, general liquefaction potential is moderate to low in the

6 California Department of Conservation (DOC). n.d. Alquist-Priolo Earthquake Fault Zones. Website: https://www.conservation.ca.gov/cgs/alquist-priolo (accessed June 2022).

7 Uniform Building Code. 1997. Structural Engineering Design Provisions, International Conference of Building Officials, Whittier.

8 Natural Resources Conservation Service (NRCS). n.d. Soil Web Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed April 2022).

project vicinity.[9] Compliance with the CBC would ensure implementation of design features to stabilize the foundation of proposed structures on site to mitigate potential effects related to liquefaction. As such, impacts associated with liquefaction would be less than significant.

Lateral Spreading. Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surface soils are transported downslope by earthquake and gravitational forces. The project site is relatively flat, and it is not near any known active faults. Furthermore, lateral spreading potential in Fresno County is considered very low due to the nature of the underlying soils in the region. Therefore, the proposed project would have a less than significant impact related to lateral spreading.

Landslides. A landslide generally occurs on relatively steep slopes and/or on slopes underlain by weak materials. The project site and surroundings are relatively flat and are not near any hills. Therefore, the proposed project would not expose people or structures to risk as a result of landslides, and there would be no impact.

Pursuant to State law, the proposed project would be designed and constructed in accordance with applicable provisions of the CBC (CCR Title 24) and other relevant professional standards to minimize or prevent damage or loss due to geologic and seismic hazards, and to minimize the risk to public safety. Therefore, the impact would be less than significant.

Impact GEO-1: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving an earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.

Level of Significance Without Mitigation: Less Than Significant

b. Would the project result in substantial soil erosion or the loss of topsoil?

Erosion is the process by which the soil and rock components of the Earth's crust are worn away and removed from one place to another by natural forces such as weathering and transportation. The main natural agents of erosion are wind and flowing water. The potential for soil erosion within the project site would greatly increase as soil on site is disturbed and exposed during grading and site preparation activities. Additionally, water is generally used with construction activities and may contribute to topsoil erosion as water moves through the project site.

Because the proposed project would involve land disturbance of over 1 acre, project construction would be required to comply with the State Water Resources Control Board (SWRCB) Construction General Permit, Order No. 2012-0006-DWQ, which requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). Implementation of an SWPPP would address potential pollutant transfer from construction activities towards receiving waters and would specify Best Management Practices (BMPs) to be used to minimize pollution of stormwater. There are

[9] County of Fresno. 2000. General Plan Update. Draft Environmental Impact Report, 4.13 Seismic and Geologic Hazards. Website: http://www2.co.fresno.ca.us/4510/4360/general_plan/gp_final_eir/eir/seisgeo413.pdf (accessed April 8, 2022).

several categories of construction BMPs. The following four categories of construction BMPs are relevant to erosion control:

- **Erosion Controls:** Cover and/or bind soil surface to prevent soil particles from being detached and transported by water or wind. Examples include mulch, geotextiles, mats, hydroseeding, earth dikes, and swales.

- **Sediment Controls:** Filter out soil particles that have been detached and transported in water. Examples include barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; and cleaning measures such as street sweeping.

- **Tracking Controls:** Minimize the tracking of soil off site by vehicles. Examples include stabilized construction roadways, construction entrances/exits, and entrance/outlet tire wash.

- **Waste Management and Controls (Housekeeping):** Management of materials and wastes to avoid contamination of stormwater. Examples include spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

With implementation of applicable BMPs from the project-specific SWPPP, erosion impacts in the project site would be reduced, and implementation of the proposed project would not result in substantial soil erosion or loss of topsoil. The impact would be less than significant.

Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil.

Level of Significance Without Mitigation: Less Than Significant

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As discussed in Section a, potential impacts associated with liquefaction, lateral spreading, and landslides would be less than significant. Additionally, the proposed project would be required to conform with the CBC, which would enforce building standards that would reduce risks related to unstable soils. Therefore, the proposed project would have a less than significant impact.

Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Level of Significance Without Mitigation: Less Than Significant

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive soils have the potential to shrink or swell significantly with changes in moisture content. The type and amount of the silt and clay content in the soil will determine the amount of shrink or

swell of the soil. Soils at the project site include Ciervo clay and Cerini clay loam, which have a relatively high shrink-swell capacity.[10]

Pursuant to State law, the proposed project would be designed and constructed in accordance with applicable provisions of the CBC (CCR Title 24) to minimize geologic- and seismic-related hazards. The CBC requires the implementation of site-specific geotechnical recommendations determined by a registered design professional for project design and construction. The CBC also includes recommendations for grading, foundation design, and other aspects of project design to minimize hazards to people and structures due to expansive soils. Therefore, with compliance with the CBC and the County's ministerial grading requirements, the proposed project would not create substantial risks to life or property due to expansive soils, and the impact would be less than significant.

Impact GEO-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property.

Level of Significance Without Mitigation: Less Than Significant

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The proposed project would include the installation of septic systems for management of sanitary sewage waste generated on site. The installation of septic systems is regulated and monitored by the Fresno County Department of Public Works and Planning (FCPWP). FCPWP's Onsite Wastewater Treatment System Guidance Manual (OWTS Manual) provides the procedural and technical details for implementation of the provisions of the Fresno County Local Agency Management Program (LAMP),[11] codified in Chapter 15.20 of the Fresno County Ordinance Code and approved by the California Regional Water Quality Control Board, Central Valley Region (RWQCB) in April 2017.[12] The provisions within the OWTS Manual are designed to protect public health, groundwater, and surface water bodies from degradation and provide safely operating Onsite Wastewater Treatment Systems (OWTS) through proper design, siting, installation, maintenance, and monitoring.

OWTS as referenced herein, includes OWTS as defined by the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (State OWTS Policy),

[10] Natural Resources Conservation Service (NRCS). n.d. Web Soil Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed April 2022).

[11] County of Fresno. 2017. Fresno County Local Area Management Program. Website: https://www.fresnocountyca.gov/files/sharedassets/county/vision-files/files/39300-fresno-county-lamp-2019.pdf (accessed July 2023).

[12] California Regional Water Quality Control Board, Central Valley Region (RWQCB). 2017. Resolution R5-2017-0033, Approving the Local Agency Management Program for Fresno County Department of Public Works and Planning. Website: https://www.waterboards.ca.gov/rwqcb5/board_decisions/adopted_orders/fresno/r5-2017-0033_lamp_res.pdf (accessed July 2023).

adopted by the SWRCB, and which took effect on May 13, 2013.[13] The FCPWP, Development Services, and Capital Projects Divisions are responsible for enforcement of the Chapter 15.20 of the Fresno County General Ordinance Code and provisions in the OWTS Manual. The RWQCB is the State agency responsible for the protection of groundwater and surface water quality in Fresno County. While the Department of Public Works and Planning, Development Services and Capital Projects Divisions administers the County's LAMP, the RWQCB retains the authority to issue Waste Discharge Requirements for any discharge of wastewater that may affect water quality.

Upon submission of an application to install a septic system, the FCPWP requires that soil profiles and percolation tests be performed on the project site. The final design of project septic systems would be based off the percolation testing results, ensuring that the soils at the site would be capable of supporting the use of the septic systems. By complying with existing FCPWP regulations and permit requirements through project design features, the project would result in a less than significant impact related to the installation of a septic system.

Impact GEO-5: The project would not 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.

Level of Significance Without Mitigation: Less Than Significant

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Subsurface sediments of the project site consist of Quaternary marine and nonmarine alluvium, lake, playa, and terrace deposits that date to the Pleistocene and Holocene. Although no paleontological resource or geologic feature has been identified at the project site, the subsurface sediment deposits at the project site have moderate sensitivity for potential paleontological resources. Should previously unknown paleontological resources or unique geologic features be discovered within the project site during project construction, implementation of Mitigation Measure GEO-6 would reduce potential impacts to unknown paleontological resources or unique geologic features to a less than significant level by ensuring that measures recommended by a qualified paleontologist would be implemented to protect potentially significant paleontological and geological resources. The impact would be less than significant.

Impact GEO-6: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measure GEO-6 In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop within 50 feet of the find and a qualified

[13] State Water Resources Control Board (SWRCB). 2022. Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). Website: https://www.waterboards.ca.gov/water_issues/programs/owts/board_adopted_policy.html (June 2023).

paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a Lead Agency-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Level of Significance With Mitigation: Less Than Significant

4.7.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to geology and soils. For geology and soils, the cumulative study area consists of Fresno County.

Seismic hazards that could potentially affect the project site are expected to be moderate due to the low to moderate historic ground shaking in the region, and the distance to known active faults. The proposed project is unlikely to be affected by seismic ground failure like liquefaction and lateral spreading due to the nature of the soils underlying the County and the history of low to moderate ground shaking in the region, or by landslides due to the relatively flatness of the project site.

The proposed project would comply with CBC and Fresno County's ministerial permitting requirements for seismic safety, and implement design recommendations to minimize or prevent damage or loss due to geologic and seismic hazards, and to minimize the risk to public safety. Compliance with requirements of the County and the CBC would also minimize other geologic hazards, such as ground subsidence, and expansive soils within the project site.

Compliance with an SWPPP would minimize soil erosion in the project site by implementing BMPs. Therefore, the project's contribution to cumulative soil erosion would be less than significant. The proposed project would also comply with FCPWP regulations and permit requirements for septic systems, as outlined in the OWTS Manual, and would design project septic systems based off FCPWP-required percolation testing results, ensuring that the soils at the project site would be capable of supporting the use of the septic systems. As such, the project's contribution to cumulative impacts related to septic tanks or alternative wastewater disposal systems would be less than significant.

Lastly, development of the project site could result in potential cumulative impacts to unique paleontological/geological resources due to accidental discovery of interred resources. If a unique paleontological/geological resource is found, construction activities would cease and consultation with a qualified paleontologist would occur, consistent with Mitigation Measure GEO-6. Therefore, with Mitigation Measure GEO-6, the proposed project would result in a less than significant cumulative impact to unique paleontological/geological resources. Thus, the proposed project would not contribute to a significant cumulative impact related to geology and soils.

Impact GEO-7: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to geology and soils.

Level of Significance Without Mitigation: Potentially Significant Impact

Mitigation Measures: Refer to Mitigation Measure GEO-6.

Level of Significance With Mitigation: Less Than Significant

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4.8 GREENHOUSE GAS EMISSIONS

This section summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities. This section also estimates the likely GHG emissions that would result from construction and operational activities associated with implementation of the proposed project, including vehicular and truck traffic, energy consumption and other emission sources. Mitigation measures are recommended where appropriate to reduce impacts to a less-than-significant level.

4.8.1 Environmental Setting

The following discussion describes existing GHG emissions in Fresno County and the San Joaquin Valley Air Basin (SJVAB), beginning with a discussion of typical GHG types and sources, impacts of global climate changes, the regulatory framework surrounding these issues, and current emission levels.

4.8.1.1 Background

The following section provides background information on GHGs and global climate change.

Global Climate Change. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific consensus on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[1]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

[1] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this analysis, the term "GHGs" will refer collectively only to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table 4.8.A shows the GWP for each type of GHG. For example, sulfur hexafluoride is 23,900 times more potent at contributing to global warming than carbon dioxide.

Table 4.8.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	310
HFC-23	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017). Website: www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents (accessed October 2023).

The following summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused

sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and consequently, the gas is building up in the atmosphere.

In 2020, total annual CO_2 accounted for approximately 80.2 percent of California's overall GHG emissions.[2] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation in dairy cows, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 10.5 percent of GHG emissions in California in 2020.[3]

Nitrous Oxide. Nitrous oxide (N_2O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3.5 percent of GHG emissions in California in 2020.[4]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. FCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[5] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the

2 California Air Resources Board (CARB). 2022a. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed October 2023).

3 United States Environmental Protection Agency (EPA). 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks#:~:text=In%202021%2C%20U.S.%20greenhouse%20gas,sequestration%20from%20the%20land%20sector (accessed October 2023).

4 Ibid.

5 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

semiconductor industry has resulted in greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.8 percent of GHG emissions in California in 2020.[6]

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of particulate matter less than 2.5 microns in size ($PM_{2.5}$) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO_2.[7] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global-warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel fueled vehicles.[8] The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[9]

4.8.2 Emissions Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

4.8.2.1 Global Emissions

Worldwide emissions of GHGs in 2021, the latest inventory year available, totaled 19.2 billion metric tons of CO2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[10]

United States Emissions. In 2021, the year for which the most recent data are available, the United States emitted about 6,340.2 million metric tons of CO_2e (MMT CO_2e). Overall, emissions in 2021 increased by 6 percent relative to the2020 total GHG emissions. This increase in total GHG emissions was driven by fossil fuel combustion due primarily to econimic acticity rebunding after the height of

6 California Air Resources Board (CARB). 2022. California Greenhouse Gas Emissions for 2000 to 2020. Trends of Emissions and Other Indicators. October 26.

7 United States Environmental Protection Agency (EPA). 2017. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed October 2023).

8 Ibid.

9 California Air Resources Board (CARB). 2017. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed October 2023).

10 United Nations Framework Convention on Climate Change (UNFCCC). 2023. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed October 2023).

the COVID-19 pandemic. However, GHG emissions in 2021 are 17 percent below those of 2005 levels. Of the five major sectors – residential and commercial, agricultural, industry, transportation, and electricity generation – transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[11]

State of California Emissions. The State emitted approximately 369.2 MMT CO_2e emissions in 2020, 35.3 MMT CO_2e lower than 2019 levels and 61.8 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e.[12] The California Air Resources Board (CARB) estimates that transportation was the source of approximately 37 percent of the State's GHG emissions in 2020, which is a smaller share than recent years, as the transportation sector saw a significant decrease of 26.6 MMT CO_2e in 2020, likely due in large part to the impact of the COVID-19 pandemic. The next largest sources included industrial sources at approximately 20 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 9 percent, high GWP at 6 percent, and waste at 2 percent.[13] It is expected that emissions have increased again since 2020, primarily due to economic activity rebounding after the height of the COVID-19 pandemic.

4.8.3 Regulatory Setting

4.8.3.1 Federal Regulations

Federal Clean Air Act. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the United States Environmental Protection Agency (EPA) has the authority to regulate CO_2 emissions under the Federal Clean Air Act (FCCA). While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 EPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the Federal Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the EPA and the NHTSA, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation

11 United States Environmental Protection Agency (EPA). 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed October 2023).

12 California Air Resources Board (CARB). 2022a. *California Greenhouse Gas Emissions for 2000 to 2020, Trends of Emissions and OtherIndicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf (accessed October 2023).

13 Ibid.

Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

4.8.3.2 State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California CO_2 emissions, Assembly Bill (AB) 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of Clean Air Act Preemption was not granted by the EPA until June 30, 2009. CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019, but the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the

coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this CAT made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020 emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO_2e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust CEQA equivalent document supporting the

supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

CARB has not yet determined what amount of GHG reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, CARB is also developing an additional protocol for community emissions). CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects an approximately 5.0 MMT CO_2e reduction due to implementation of SB 375.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed the CARB and the CAT to identify a list of "discrete early action GHG reduction measures" that could be adopted and made enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed EO S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard (LCFS). This executive order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs the CARB to consider the LCFS as a discrete early action measure. In 2011, U.S. District Court Judge Lawrence O'Neil issued an injunction preventing implementation of the LCFS, ruling that it is unconstitutional. In 2012, the Ninth Circuit Court of Appeal stayed the District Court's injunction, allowing implementation of the LCFS. The Ninth Circuit decided to uphold the LCFS.

In June 2007, the CARB approved a list of 37 early action measures, including three discrete early action measures (LCFS, Restrictions on GWP Refrigerants, and Landfill CH_4 Capture).[14] Discrete early action measures are measures that were required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code Section 38560.5. The CARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF_6 reductions from the non-electricity sector. The combination of early action measures is estimated to reduce statewide GHG emissions by nearly 16 MMT.[15]

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting

[14] California Air Resources Board (CARB). 2007b. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

[15] California Air Resources Board (CARB). 2007a. "ARB approves tripling of early action measures required under AB 32" News Release 07-46. October 25.

the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[16] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

The 2022 Scoping Plan[17] was approved in December 2022 and assesses progress toward achieving the SB 32 2030 target and laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the Central Valley/San Joaquin reduction

16 California Air Resources Board (CARB). 2017a. *California's 2017 Climate Change Scoping Plan*. November.

17 California Air Resources Board (CARB). 2022a. *2022 Scoping Plan*. November 16. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed October 2023).

targets for per capita vehicular emissions were 6 to 13 percent by 2020 and are 13 to 16 percent by 2035 as shown in Table 4.8.B.

Table 4.8.B: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (%)	By 2035 (%)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015). Governor Jerry Brown signed Executive Order B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. Senate Bill 350 (SB 350), signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the CEC for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved using existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016 the Legislature passed, and the Governor signed, SB 32, and Assembly Bill 197 (AB 197). SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order B-30-15. SB 32 builds on AB 32 and keeps us on the path toward

achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100 (SB 100). On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill (AB) 1279. AB 1279 was signed in September 2022 and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant State agencies to achieve these goals.

California Building Efficiency Standards (Title 24, Part 6). The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The current set of standards were adopted in 2022 and will apply to projects seeking building permits on or after January 1, 2023. Energy

efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade emissions trading program developed by CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The program aims to regulate GHG emissions from the largest producers in the State by setting a declining statewide firm limit, or cap, on allowable annual GHG emissions. The cap-and-trade program was initially slated to sunset in 2020, but the passage of SB 398 in 2017 extended the program through 2030.[18]

Executive Order N-79-20. EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

California Integrated Waste Management Act. To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting 2012 Mandatory Commercial Recycling Regulation requires that on and after July 1, 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act. In April 2016, AB 1826 further modified the California Integrated Waste Management Act, requiring businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. If CalRecycle determines that statewide disposal of organic waste has not been reduced by 50 percent below 2014 levels by 2020, businesses generating more than two cubic yards of organic waste per week would be subject to these waste collection requirements. CalRecycle plans to make this assessment in the fall of 2020. Diverting organic waste from landfills reduces emissions of CH_4. This is equivalent to reducing anaerobic decomposition of organic waste that

[18] California Air Resources Board (CARB). 2014. Cap-and-Trade Program. Website: www.arb.ca.gov/cc/capandtrade/capandtrade.htm (accessed August 2023).

would have otherwise occurred in landfills where organic waste is often buried with other inorganic waste.

Low Carbon Fuel Standard. In January 2007, EO S-01-07 established an LCFS. This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18. In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric vehicle charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private

investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

4.8.3.3 Local Regulations

San Joaquin Valley Air Pollution Control District. Fresno County is located within the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD has regulatory authority over certain stationary and industrial GHG emission sources and provides voluntary technical guidance on addressing GHGs for other emission sources in a CEQA context. District initiatives related to GHGs are described below.

Climate Change Action Plan. The San Joaquin Valley Air Pollution Control District Climate Change Action Plan (CCAP) was adopted on August 21, 2008. The CCAP includes suggested best performance standards (BPS) for proposed development projects. However, the SJVAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2019 California Green Building Code) the 2030 GHG targets, established in SB 32, and the 2045 carbon neutrality goals included in AB 1279.

San Joaquin Valley Carbon Exchange and Rule 2301. The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The Exchange was implemented with the adoption of Amendments to Rule 2301 Emission Reduction Credit Banking on January 19, 2012. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley.

The SJVAPCD incorporated a method to register voluntary GHG emission reductions with amendments to Rule 2301. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

The SJVAPCD is participating in a new program developed by the California Air Pollution Control Officers Association (CAPCOA) to encourage banking and use of GHG reduction credits referred to as the CAPCOA Greenhouse Gas Reduction Exchange (GHGRx). The GHGRx provides information on GHG credit projects within participating air districts. The District is one of the first to have offsets available for trading on the Exchange.

4.8.4 Impacts and Mitigation Measures

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

4.8.4.1 Significance Criteria

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact related to greenhouse gas emissions if it would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Section 15064.4 of the *State CEQA Guidelines* states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The SJVAPCD has not developed or adopted numeric GHG significance thresholds. Therefore, this analysis evaluates the GHG emissions based on the project's consistency with State GHG reduction goals. The CARB 2022 Scoping Plan includes key project attributes that reduce operational GHG emissions in Appendix D, Local Actions[19], of the 2022 Scoping Plan. As discussed in Appendix D of the 2022 Scoping Plan, absent consistency with an adequate, geographically specific GHG reduction plan such as a CEQA-qualified CAP, the first approach the State recommends for determining whether a project would align with the State's climate goals is to examine whether the project includes key project attributes that reduce operational GHG emissions while simultaneously advancing fair housing. However, these recommendations are only applicable to residential or mixed-use residential development. As the proposed project would construct a pistachio processing

[19] California Air Resources Board (CARB). 2022. *2022 Scoping Plan Appendix D Local Actions.* November. Website: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf (accessed October 2023).

facility, the Scoping Plan key project attribute tables for reducing GHG emissions would not be applicable to the proposed project.

In April 2022, the Bay Area Air Quality Managing District (BAAQMD) adopted the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans[20] (Justification Report) document, which identifies applicable GHG significance thresholds. These thresholds establish whether a project would be consistent with California's efforts to meet long-term climate goals of achieving carbon neutrality by 2045. If a project is designed and built to incorporate design elements related to natural gas, energy, VMT, and electric vehicles, then it would contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change.

The Justification Report provides substantial evidence supporting the use of their thresholds for projects throughout California as the thresholds are applicable to meeting the States goal. In the absence of any County or SJVAPCD specific guidelines or thresholds, this analysis evaluates the proposed project for consistency with the identified project design elements as the applicable thresholds of significance to establish if the proposed project is achieving its "fair share" of emission reductions to support long term State goals for GHG emissions and carbon neutrality.

According to the Justification Report, a project would have a less than significant impact related to GHG emissions if it would include the following project design elements:

1. Buildings
    a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
    b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
2. Transportation
    a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
        1) Residential projects: 15 percent below the existing VMT per capita
        2) Office projects: 15 percent below the existing VMT per employee
        3) Retail projects: no net increase in existing VMT

[20] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

These project design elements are utilized in the following analysis as the thresholds of significance to evaluate the project's potential GHG emissions impact.

4.8.4.2 Project Impacts

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

This section discusses the proposed project's potential impacts related to the release of GHG emissions for both construction and project operation.

Construction impacts. Construction-related GHG emissions associated with each phase of the proposed project would occur over a limited time and would consist primarily of emissions from equipment exhaust. Although the proposed project's anticipated emissions from construction activities are quantified herein, in determining the potential significance from such activities, it is important to note neither the County nor SJVAPCD has established a quantified construction GHG emissions threshold. The SJVAPCD recommends that GHG emissions are quantified, and lead agencies are encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHG emissions would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Using CalEEMod, it is estimated that implementation of the proposed project would generate a total of approximately 1,495.7 metric tons of CO_2e during construction, as shown in Table 4.8.C below. These estimated emissions are provided for informational purposes. As mentioned above, the SJVAPCD has not addressed GHG emission thresholds for construction. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. Construction GHG emissions were amortized over the life of the project (assumed to be 30 years) and added to the operational emissions. When annualized over the life of the project, amortized construction emissions would be approximately 49.9 metric tons of CO_2e per year.

Operational Emission Impacts. As detailed in Section 3.0, Project Description, long-term operation of the proposed project would generate GHG emissions from mobile, area, stationary, waste, and water sources as well as indirect emissions from sources associated with energy consumption.

Table 4.8.C: Unmitigated Construction GHG Emissions in Metric Tons Per Year

Construction Year	Greenhouse Gases (Metric Tons Per Year)			
	CO_2	CH_4	N_2O	CO_2e
2024	387.5	<0.1	<0.1	389.3
2025	390.5	<0.1	<0.1	394.7
2026	388.3	<0.1	<0.1	392.6
2027	313.5	<0.1	<0.1	316.6
2028	2.5	<0.1	<0.1	2.5
Total Project Construction Emissions				**1,495.7**
Amortized Construction Emissions				**49.9**

Source: Compiled by LSA (2023).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalents
N_2O = nitrous oxide

Stationary sources of emissions associated with the proposed project would include conveyors, pre-cleaners, hullers, water pumps, baggers, hoppers, roasters, and dryers. Mobile-source GHG emissions would include project-generated vehicle trips. The off-road mobile equipment proposed to be used at the project site includes forklifts, bobcats, and front-end loaders, which are proposed to be all-electric equipment. Area-source emissions would be associated with light industrial activities on site, and the storage and transport of pistachios within the proposed facilities.

Energy source emissions are typically generated at off-site utility providers as a result of increased electricity demand generated by a project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing waste. In addition, water source emissions associated with the proposed project are generated by water supply, water treatment, water distribution, and wastewater treatment in the project site.

Following guidance from the SJVAPCD, GHG emissions for operation of the project were calculated using CalEEMod. Based on the analysis results, summarized in Table 4.8.D, the proposed project would result in emissions of approximately 7,235.4 metric tons (MT) CO_2e per year. These estimated emissions are provided for informational purposes and the significance of proposed project is further analyzed below.

Per the significance thresholds described above, a less than significant GHG impact would occur if the project is consistent with the identified design standards.

Table 4.8.D: Unmitigated Operational GHG Emissions (Metric Tons Per Year)

Emissions Source	Greenhouse Gases			
	CO_2	CH_4	N_2O	CO_2e
Amortized Construction Emissions				**49.9**
Operational Emissions				
Mobile Sources – Vehicles and Light Duty Trucks	29.1	<0.1	<0.1	29.4
Mobile Sources –Heavy Heavy Duty Trucks	3,952.1	0.1	0.6	4,142.9
Area Sources	2.9	<0.1	<0.1	2.9
Energy Sources	1,129.1	0.1	<0.1	1,135.7
Water Sources	212.3	10.1	0.1	538.4
Waste Sources	381.9	38.2	0.0	1,336.2
Off-Road Equipment Sources	0.0	0.0	0.0	0.0
Total Operational Emissions				**7,185.5**
Total Annual Emissions				**7,235.4**

Source: Compiled by LSA (2023).
CH_4 = methane CO_2e = carbon dioxide equivalents
CO_2 = carbon dioxide N_2O = nitrous oxide

Natural Gas Usage. The proposed project would include the use of natural gas for select operational equipment, such as the dryers used for processing product material. According to information provided by the project applicant, estimated natural gas during peak harvesting season would be approximately 12 million standard cubic feet per day (MMSCFD). The emissions resulting from the natural gas usage is included under the "Energy" section of Table 4.8.D. The SJVAPCD has identified BPS for pistachio dryers and dehydrators[21] for which the proposed project would comply with. The BPS and GHG emission control measures for pistachio dryers by including the use of an electric motor to drive combustion air fans. As such, the proposed project would include the applicable BPS measures for project operational equipment. It should be noted that stationary equipment at the project site would be subject to SJVAPCD permitting requirements, as applicable, and control technology implemented to reduce emissions of criteria pollutants would also have a co-benefit of reducing GHG emissions, which has not been accounted for in this analysis.

Per the project applicant, for effective operation of the proposed equipment and due to the high-power demand required to effectively operate the types of equipment needed to process and dry the product, there are currently no industrial all-electric units on the market for the product drying process and natural gas equipment would be used. It is important to note that the project applicant is currently processing their pistachios at another facility which uses older, less-efficient equipment than what is proposed for the project facility. One of the proposed pistachio dryers will be a test prototype pistachio dryer with the potential of using of up to 30 percent less natural gas, while achieving the desired consistent product.[22] However, the facility will have electrical connections which would allow for future electric equipment as the technology for these types of units advances. All other energy needs of the facility would be provided by electricity, consistent with this design

[21] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2010. Best Performance Standards. Website: https://www.valleyair.org/Programs/CCAP/bps/Draft%20BPS%20Evaluation%20-%20Pistachio%20Dryers.pdf (accessed October 2023).

[22] County of Fresno. October 27, 2023. Chris Motta, Division Manager, personal communication.

criterion. The proposed dryer units would be energy efficient; however, since it would not be technologically feasible at this time to implement all-electric equipment, the proposed project would not meet this design element.

Energy Usage. Under this design criterion, the project must not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. Energy usage associated with the proposed project is evaluated in Section 4.6, Energy. As discussed in Section 4.6.3.2 (a) of Section 4.6, energy use consumed by the proposed project would be associated with natural gas and electricity consumption, in addition to fuel used for vehicle trips associated with the project. Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. As described above, the project incorporates BPS for pistachio plans. While all buildings would be constructed consistent with the latest Title 24 standards for energy efficiency. Therefore, the proposed project would be consistent with this design element.

Vehicle Miles Traveled. As discussed under Section 4.8.4.1 (Significance Criteria), above, the project should achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) in order to be considered to cause a less than significant GHG emissions impact from transportation sources, or should meet a locally adopted Senate Bill 743 VMT target. As discussed in Section 4.13.3.2 (b) of Section 4.13, Transportation, the proposed project would generate approximately 249 average daily trips during the short-term 28-day peak harvest season, including 43 employee trips, 4 vehicle service trips, 190 raw material hauling truck trips, and 12 dry waste hauling truck trips. It should be noted that the proposed project trip generation evaluates a worst-case scenario for daily trips generated during peak harvesting season. The harvest season varies from year to year but is estimated to span 84 days from September 1 to mid-November, with peak-harvest season occurring during the first four weeks (September to October). The hauling of raw pistachios, processed pistachios and waste from the project site would generate truck trips that would vary during peak harvest season and during the off season. It is expected that daily truck trips would be lower during off season and emissions resulting from diesel and gasoline exhaust would be reduced. As described in Section 4.13, Transportation, this project would be a "Low Trip Generator" as compared to the Fresno Council of Governments (Fresno COG) VMT Guidelines and would not have a significant impact on transportation in the region. Therefore, the proposed project would be consistent with this project design element. It should be noted that vehicle trip lengths could be reduced by half compared to distances to transport produce to existing processing facilities currently used by the project applicant.[23]

Electric Vehicle Requirements. The final project design element that the proposed project should include to ensure that it is achieving its "fair share" of GHG emission reductions is that a project should achieve compliance with off-street electric vehicle requirements in the most recently adopted version of the California Green Buildings Standards Code (CALGreen) Tier 2

[23] County of Fresno. October 27, 2023. Chris Motta, Division Manager, personal communication.

measures. In order to meet the CALGreen Tier 2 requirement, the proposed project would need approximately 11 electric vehicle (EV) capable spaces and 6 electric vehicle spaces with service equipment (EVSE), for a total of 17 EV/EVSE parking spaces[24]. As described in Section 3.0 Project Description, a maximum of 14 employees would be on site during hours of operation. Most of the vehicles operating at the site would include hauling trucks, which would run on diesel fuel. Therefore, based on applicability constraints related to employee numbers and the types of vehicles that would be used by the project, it would not be feasible to implement the 17 EV/EVSE spaces. As such, the proposed project would not meet this design element.

Summary. As described above, the project would not meet the natural gas or electric vehicle design criteria. Therefore, operation of the proposed project would have the potential to generate GHG emissions that would have a significant effect on the environment.

As shown in Table 4.8.D, the majority of the GHG emissions (approximately 58 percent) are associated with non-construction related mobile sources. The project would have limited control of the composition of third-party truck fleets, and it would not be feasible to require other parties to upgrade truck fleets to incorporate zero or near-zero emissions technologies as mitigation for the project. Due to the project's limited control over other parties' truck fleets, the project could not feasibly reduce all mobile source emissions from the project. In addition, emissions of motor vehicles are controlled by State and federal standards, and the proposed project has no control over these standards. The proposed project would be required to comply with all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation,[25] Periodic Smoke Inspection Program (PSIP),[26] and the Statewide Truck and Bus Regulation.[27] The next largest source of GHG emissions is associated with waste sources. The proposed project would be required to comply with applicable federal, State, and local recycling, reduction, and waste requirements and policies, as described in more detail in Section 4.14, Utilities, of this EIR, and there are no further feasible mitigation measures which could reduce emissions from this source. As further detailed above, the GHG emissions from project operations would be minimized to the extent possible through the implementation of BPS measures and all-electric

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24 CalGreen Energy Services Inc. *2022 CalGreen Tier 1 and 2 EV Requirements.* August. Website: https://calgreenenergyservices.com/2022/08/24/2022-calgreen-tier-1-and-2-ev-requirements/#:~:text=If%20your%20project%20has%2020,the%2035%25%20EV%20Ready%20spaces (accessed October 2023).

25 In December 2008, CARB adopted a regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation is available at: https://ww2.arb.ca.gov/our-work/programs/ttghg/about.

26 The PSIP program requires that diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions to ensure compliance. CARB's PSIP program is available at: https://www.arb.ca.gov/enf/hdvip/hdvip.htm.

27 The regulation requires that newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model-year engines or equivalent. CARB's Statewide Truck and Bus Regulation is available at: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

equipment design, where feasible. There are no further mitigation measures or project design elements that are feasible for implementation. Therefore, even with the implementation of BPS for stationary sources and compliance with all applicable regulations, operation of the proposed project would have the potential to generate significant GHG emissions that would have a significant effect on the environment.

Impact GHG-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Level of Significance Without Mitigation: Significant and Unavoidable Impact.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

SJVAPCD Climate Change Action Plan. The SJVAPCD has adopted a CCAP, which includes suggested best performance standards (BPS) for proposed development projects. However, the SJVAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2022 California Green Building Code) and the 2030 GHG targets, established in SB 32. As mentioned above, the County of Fresno has not developed or adopted numeric GHG significance thresholds. As such, the proposed project was evaluated for consistency with the applicable BPS measures identified in the CCAP. As mentioned above, the SJVAPCD has identified BPS for pistachio dryers and dehydrators[28] that can be used to determine significance of project specific GHG impacts. The proposed project would comply with BPS and GHG emission control measures for pistachio dryers by including the use of an electric motor to drive combustion air fans. Therefore, the proposed project would comply with all applicable BPS measures from the CCAP and would not conflict with or obstruct the goals of the CCAP.

2022 Scoping Plan. The following discussion evaluates the proposed Project according to the goals of the 2022 Scoping Plan, EO B-30-15, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[29] to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on

[28] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2010. Best Performance Standards. Website: https://www.valleyair.org/Programs/CCAP/bps/Draft%20BPS%20Evaluation%20-%20Pistachio%20Dryers.pdf (accessed October 2023).

[29] California Air Resources Board (CARB). 2017a. *California's 2017 Climate Change Scoping Plan*. November.

outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed project would comply with the CALGreen Code, regarding energy conservation and green building standards. In addition, the elimination of natural gas in new development would help projects implement their "fair share" of GHG emission reductions necessary to achieve carbon neutrality by 2045, consistent with State goals. As such, if a project does utilize natural gas, a lead agency can conclude that it would not be consistent with achieving the 2045 neutrality goal and will have a cumulative considerable impact on climate change. As discussed in the preceding section, the proposed project would include the use of natural gas during operations. Therefore, the proposed project would not contribute to its "fair share" of GHG emission reductions necessary to support achieving the State goals of long-term GHG emission reductions and carbon neutrality by 2045.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the proposed project would comply with the CALGreen Code, which includes a variety of different measures, including the reduction of wastewater and water use. The project would collect, filter, and reuse process wastewater from operation of the pistachio processing facility for crop irrigation of surrounding orchards, which would contribute to conservation of irrigation water. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed Project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a

3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

While the proposed project would comply with all regulations adopted for the purpose of reducing GHG emissions, the proposed project would not contribute to its "fair share" of emission reductions required to support achieving long-term 2045 carbon neutrality, consistent with State goals, due to the utilization of natural gas in equipment operations[30]. Therefore, the proposed project would conflict with the plans and policies adopted for the purpose of reducing the emissions of greenhouse gases, including the CARB 2022 Scoping Plan, Executive Order B-30-15, SB 32, and AB 1279.

Fresno COG's 2022 Regional Transportation Plan. The Fresno COG Regional Transportation Plan (RTP) reflects transportation planning for Fresno County through 2046. The vision, goals, and policies in the 2022 RTP are intended to serve as the foundation for both short and long-term planning and guide implementation activities. The core vision in the 2022 RTP is to create a region of diverse, safe, resilient, and accessible transportation options that improve the quality of life for all residents by fostering sustainability, equity, a vibrant economy, clean air, and healthy communities. The 2022 RTP contains transportation Projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The actions in the 2022 RTP address all transportation modes (highways, local streets and roads, mass transportation, rail, bicycle, aviation facilities and services) and consist of short and long-term activities that address regional transportation needs. While the actions are organized by the five key policy areas, many of them are cross-cutting and support multiple goals and policies. Some actions are intended to support the Sustainable Communities Strategy and reduce greenhouse gas emissions directly, while others are focused on the RTP's broader goals. The 2022 RTP does not require that local General Plans, Specific Plans, or zoning be consistent with the2022 RTP, but provides incentives for consistency for governments and developers.

The proposed project would not interfere with the Fresno Council of Government's ability to achieve the region's GHG reductions. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the 2022 RTP targets since those targets were established and are applicable on a regional level. The proposed project would include a pistachio processing facility. As such, the proposed project land uses would be consistent with the growth assumptions used in the 2022 RTP. In addition, the proposed project would not include residential uses that would increase population. Therefore, it is anticipated that implementation of the proposed project would not interfere with Fresno Council of Government's ability to implement the regional strategies outlined in the 2022 RTP.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 RTP and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project

[30] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs and impacts would be less than significant.

Impact GHG-2: While the proposed project would comply with the SJVAPCD CCAP BPS requirements and would not conflict with the Fresno COG RTP for Fresno County, the proposed project would not be consistent with long-term State goals for GHG emission reductions and carbon neutrality by 2045, as included in the 2022 Scoping Plan and associated State legislation, including SB 32 and AB 1279. Therefore, the project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG. This would be a significant and unavoidable impact.

Level of Significance Without Mitigation: Significant and Unavoidable

4.8.4.3 Cumulative Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in greenhouse gas emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As mentioned above, neither the County of Fresno nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Based on the analysis presented above, the proposed project would not meet all of the project design features included in the Justification Report[31]. These design elements help projects implement their "fair share" of GHG emissions reductions to support the achievement of long-term GHG emission reductions and 2045 carbon neutrality, consistent with State goals. The proposed project would not meet the natural gas or EV project design features. As discussed in the Justification Report, if a project does not meet the project design elements, a lead agency can conclude that it would not be consistent with achieving the 2045 neutrality goal and will have a cumulatively considerable impact on climate change.

The proposed project is implementing GHG emission reduction measures where feasible, including proposing to utilize all-electric off-road equipment, and would implement BPS and other regulatory requirements required by the SJVAPCD and CARB. There are no additional mitigation measures feasible that would allow the proposed project to achieve the project design features recommended in the Justification Report to support the project achieving its "fair share" of emission reductions. Therefore, the proposed project would have a cumulatively considerable impact on climate change. This impact would be significant and unavoidable.

[31] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

Impact GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a significant cumulative impact with respect to GHG emissions.

Level of Significance Without Mitigation: Significant and Unavoidable

4.9 HAZARDS AND HAZARDOUS MATERIALS

This section considers the potential for the project to result in impacts related to hazards and hazardous materials and identifies mitigation measures necessary to avoid and/or reduce potential significant impacts to less than significant levels. This analysis consists of a description of the existing conditions at the project site and surrounding area, a summary of the regulatory framework that guides the decision-making process for determining if the project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

4.9.1 Environmental Setting

4.9.1.1 Project Area

The project site is 98 acres in size, used for agriculture and located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. Pilibos Ranch is located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project site. Other agriculture-supporting buildings are located in the vicinity of the project site.

Hazardous Sites Near Proposed Project. The California Environmental Protection Agency (CalEPA) is required to compile, maintain, and update lists annually of hazardous material releases under California Government Code Section 65962.5. The California Department of Toxic Substances Control (DTSC) is responsible for maintaining the Hazardous Waste and Substances Site List (Cortese List) along with other State and local government agencies to provide additional hazardous material release information for annual updates.[1] The DTSC online EnviroStor database and the State Water Resources Control Board (SWRCB) online Geotracker database include hazardous material release sites along with other categories of sites or facilities specific to each agency's jurisdiction.[2,3]

A review of the EnviroStor database identified 44 active sites in Fresno County, including one site in Mendota, 8 miles northeast of the project site. A review of the Geotracker database identified 182 open cases for sites in Fresno County, including 2 open cases for sites near Mendota. Table 4.9.A details the location of hazardous sites listed in EnviroStor and Geotracker in the vicinity of the project site.

1 California Environmental Protection Agency (Cal/EPA). 2022. Cortese List Data Resources. Website: calepa.ca.gov/sitecleanup/corteselist (accessed May 2023).
2 California Department of Toxic Substances Control (DTSC). 2022. EnviroStor. Website: www.envirostor.dtsc.ca.gov/public (accessed May 2023).
3 State Water Resources Control Board (SWRCB). 2022. GeoTracker. Website: https://geotracker.waterboards.ca.gov/ (accessed May 2023).

Table 4.9.A: Facilities Listed on the DTSC EnviroStor and SWRCB Geotracker Databases Near the Project Site

Site Facility Name	Site/Facility Type	Status	Address Description
Washington Elementary School	School Cleanup	Active	1599 5th Street Mendota, CA 93640
Vacant Building (T0601900210)	LUST Cleanup Site	Open – Site Assessment	812 Oller Street Mendota, CA 93640
Spreckels Sugar Co.	Cleanup Program Site	Open – Assessment & Interim Remedial Action	29400 Whitesbridge Mendota, CA 93640

Source 1: EnviroStor (DTSC 2022).
Source 2: Geotracker (SWRCB 2022).
DTSC = California Department of Toxic Substances Control
LUST = leaking underground storage tank
SWRCB = State Water Resources Control Board

4.9.2 Regulatory Setting

4.9.2.1 Federal Regulations

Toxic Substances Control Act. Established in 1976 and amended on December 31, 2002, the Toxic Substances Control Act (TSCA) (15 United States Code [USC] Section 2601-2692) grants the United States Environmental Protection Agency (EPA) power to require proper reporting, recordkeeping, 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 LBP 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 USC 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 Code of Federal Regulations (CFR) defines "chemicals or hazardous materials" for the purposes of SARA III.

Federal Air Regulations, Part 77. The Federal Aviation Administration (FAA) is charged with the review of construction activities that occur in the vicinity of airports. Its role in reviewing these activities is to ensure that new structures do not result in a hazard to navigation. The regulations in

the Federal Air Regulations (14 CFR, Part 77) are designed to ensure that no obstructions in navigable air space are allowed to exist that would endanger the public. Proposed structures are also evaluated against Terminal En Route Procedures, which ensure that a structure does not adversely impact flight procedures. Tall structures, including buildings, construction cranes, and cell towers in the vicinity of an airport can be hazardous to the navigation of airplanes. Federal Air Regulations Part 77 identifies the maximum height at which a structure would be considered an obstacle at any given point around an airport. The extent of the off-airport coverage that needs to be evaluated for tall structure impacts can extend miles from an airport facility. In addition, Federal Air Regulations Part 77 establishes standards for determining whether objects constructed near airports will be considered obstructions in navigable airspace, sets forth notice requirements of certain types of proposed construction or alterations, and provides for aeronautical studies to determine the potential impacts of a structure on the flight of aircraft through navigable airspace.

Hazardous Materials Transportation Act (HMTA) – Safe Transport of Hazardous Materials. The United States Department of Transportation (USDOT) regulates hazardous materials transportation between states under CFR Title 49, Chapter 1, Part 100-185. Within California, the California Department of Transportation (Caltrans) and the California Highway Patrol (CHP) enforce federal law. Together, these agencies determine driver training requirements, load labeling procedures, and specifications for container types to be used.

Federal Emergency Management Agency (FEMA). With respect to emergency planning, FEMA is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, state, and local levels. Enforcement of these laws and regulations is delegated to state and local environmental regulatory agencies.

Resource Conservation and Recovery Act (RCRA). The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provide the framework for a regulatory program designed to prevent releases from underground storage tanks (USTs). The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards.

4.9.2.2 State Regulations

California Health and Safety Code and Code of Regulations. Business emergency plans and chemical inventory reporting is mandated under California Health and Safety Code Chapter 6.95 and California Code of Regulations (CCR), Title 19, Section 2729. Businesses are required to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. If a business

uses hazardous materials (standalone or in use with other product) in certain quantities, an emergency plan must be provided.

California Environmental Protection Agency (Cal/EPA). CalEPA is authorized by the EPA to enforce and implement certain laws and regulations regarding hazardous materials. Under Cal/EPA, the DTSC protects the State and people from hazardous waste exposure under RCRA and the California Health and Safety Code. The DTSC requirements include written programs and response plans such as the preparation of a Hazardous Materials Business Plan (HMBP). Programs under the DTSC includes aftermath clean-up of improper hazardous waste management, evaluation of samples taken from sites, regulation enforcement regarding use, storage, and disposal of hazardous materials and encouragement of pollution prevention.

California Division of Occupational Safety and Health (Cal/OSHA). Cal/OSHA is the State-level agency responsible for ensuring workplace safety and is responsible for adoption and enforcement of workplace safety standards and safety practices. If a site is contaminated, a Site Safety Plan must be created and implemented for the safety of workers. A Site Safety Plan establishes policies, practices, and procedures for workers and the public to follow to prevent exposure to hazardous materials originating from a contaminated site or building.

California Building Code (CBC). The CBC, contained in CCR Title 24, Part 2, identifies building design standards and includes standards for fire safety. The CBC is updated every 3 years, with the most recent version of the code effective January 1, 2020. The CBC is effective statewide; however, local jurisdictions may adopt more restrictive standards based on locality's conditions. A local city and country building official must check plans for commercial and residential buildings to ensure compliance with the CBC. Fire safety compliance with the CBC includes fire sprinkler installation in all new residential, high rise, and hazardous materials buildings; establishment of fire-resistant standards for fire doors, building materials, and certain types of construction; and debris and vegetation clearance within a prescribed distance from occupied structures in wildfire hazard areas.

California Department of Forestry and Fire Protection (CAL FIRE).PRC 4201-4204 and Government Code 51175-89 requires CAL FIRE to evaluate fire threat potential and hazard severity according to areas of responsibility (i.e., State and local). Evaluations are based on topography, fire history, and climate, and include fire threat rankings. In 2012, CAL FIRE produced the Strategic Plan for California that contains goals, objectives, and policies to prepare and mitigate for the effects of fire on California's natural and built environments. The Strategic Plan was updated in 2019 to reaffirm, with minor adjustments, the Mission, Vision, and Values of the 2012 Strategic Plan.

California Fire Code (CFC). The CFC is updated every 3 years with the most current update effective January 1, 2020. The CFC contained in CCR Title 24, Part 9 incorporates by adoption the International Fire Code of the International Code Council with California amendments. Local jurisdictions can also adopt more restrictive standards based on local conditions, as previously mentioned with the CBC. The CFC regulates building standards, fire department access, fire protection systems and devices, fire and explosion hazard safety, hazardous material storage and use, and building inspection standards.

California Department of Transportation and California Highway Patrol. Caltrans and the CHP are responsible for enforcing federal and State regulations, as well as responding to hazardous material transportation emergencies. Caltrans is the first responder for hazardous material spills and releases on highway and freeway lanes, as well as intercity rail services. The CHP enforces proper labeling and packing regulations of hazardous materials in transit by performing regular vehicle and equipment inspections.

4.9.2.3 Local Regulations

San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD has regulations (including Rule 4002, National Emission Standards for Hazardous Air Pollutants,[4] and Rule 3050, Asbestos Removal Fees[5]) that require compliance with the asbestos demolition and renovation requirements developed by the EPA in the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, 40 CFR, Part 61, Subpart M.

Fresno County General Plan. The General Plan contains policies with respect to managing hazardous materials and addressing potential hazards related to accidental releases of hazardous materials. General Plan policies applicable to the proposed project are included in Table 4.9.B.

Table 4.9.B: General Plan Policies Related to Hazards and Hazardous Materials

Policy/Action Item No.	Policy
Health and Safety Element	
Policy HS-F.1	The County shall require that facilities that handle hazardous materials or hazardous wastes be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations
Policy HS-F.2	The County shall require that applications for discretionary development projects that will use hazardous materials or generate hazardous waste in large quantities include detailed information concerning hazardous waste reduction, recycling, and storage.
Policy HS-F.4	For redevelopment or infill projects or where past site uses suggest environmental impairment, the County shall require that an investigation be performed to identify the potential for soil or groundwater contamination. In the event soil or groundwater contamination is identified or could be encountered during site development, the County shall require a plan that identifies potential risks and actions to mitigate those risks prior to, during, and after construction.
Policy HS-F.5	The County shall require that demolition of structures where friable asbestos or other hazardous materials could be released into the environment comply with applicable regulations and standards.

Source: General Plan (County of Fresno 2000).

[4] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2004. Rule 4002, National Emission Standards for Hazardous Air Pollutants. Website: https://ww2.valleyair.org/media/g0pbrkhw/rule-4002.pdf (accessed October 2023).

[5] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2018. Rule 3050, Asbestos Removal Fees. Website: https://ww2.valleyair.org/media/mwzegyxs/rule-3050.pdf (accessed October 2023).

4.9.3 Impacts and Mitigation Measures

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

4.9.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on hazards and hazardous materials if it would:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;

d. Be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

4.9.3.2 Project Impacts

The following discussion describes the potential impacts and impact significance related to hazard and hazardous materials that could result from implementation of the proposed project. Mitigation measures are provided as necessary to reduce potential impacts.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Hazardous materials are chemicals that could potentially cause harm during an accidental release and are defined as being toxic, corrosive, flammable, reactive, an irritant, or strong sensitizer. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. The probable frequency and severity of consequences from the use, transport, or disposal of hazardous materials is affected by the type of substance, quantity used or managed, and the nature of the activities and operations. The proposed project consists of the development of a pistachio hulling, processing, and packing facility that can process the Project Applicant's pistachio crops from surrounding pistachio orchards. Trucks carrying pistachios from the Project Applicant's orchards would deposit their load on a conveyor belt system that would transport the pistachios through different sections of the proposed facility that would include a huller building, a gas-powered dryer area, a drive-over dump pit area, and an area with storage silos. The proposed project would be implemented in four phases, and each phase would include the construction and addition of buildings, working areas, and equipment to increase the capacity of the project site.

Construction of the proposed project would involve the use of chemical agents, solvents, paints, and other hazardous materials that are associated with construction activities. The amount of hazardous chemicals present during construction would be limited and would be handled in compliance with existing regulations, including regulations included in Section 4.9.2, Regulatory Setting, and Table 4.9.B of this section. The potential for the release of hazardous materials during project construction is low and, even if a release would occur, it would not result in a significant hazard to the public, surrounding land uses, or environment due to the small quantities of these materials used during construction.

The project site is currently used for agricultural operations, and the proposed project would involve the construction of a facility that would process agricultural crops, and would not require the use of large quantities of hazardous materials. Operation of the proposed project would involve the use of small quantities of commercially available hazardous materials (e.g., paint, cleaning supplies) that could be potentially hazardous if handled improperly or ingested. However, these products are not considered acutely hazardous and are not generally considered unsafe. All storage, handling, and disposal of hazardous materials during project construction and operation would comply with applicable standards and regulations, as outlined above. Therefore, the proposed project would have a less than significant impact associated with the routine transport, use, or disposal of hazardous materials.

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous material.

Level of Significance Without Mitigation: Less Than Significant

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As discussed under Section a, implementation of the proposed project would result in the use and storage of commercially available hazardous materials, including common cleaning products,

building maintenance products, fuels, paints and solvents. However, compliance with the applicable federal, State, and local regulations outlined under Section 4.9.2, Regulatory Setting, and Table 4.9.B would reduce the risk of an accidental release of hazardous materials on the project site to a less than significant level.

The project site is located in an agricultural area of Fresno County and is currently used for agricultural operations. The United States Department of Agriculture (USDA) CropScape, a crop-specific land cover map, shows available crop land cover data for the project site starting in 2007 through 2022, indicating the project site has been in active agricultural operation for at least 15 years and has not been occupied by a use generating substantially hazardous emissions or using acutely hazardous materials. Additionally, as shown in Table 4.9.A, the project does not contain or is located in the vicinity of a hazardous site designated by the DTSC and SWRCB. As such, development of the project site would not result in hazards to the public or environment due to accident conditions involving release of hazardous materials in the environment. Therefore, the impacts would be less than significant.

> **Impact HAZ-2:** The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
>
> **Level of Significance Without Mitigation:** Less Than Significant

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The closest existing school to the project site is Mendota High School, located approximately 8 miles northeast from the site. As previously stated, the proposed project would not result in the use or emission of substantial quantities of hazardous materials that could pose a human or environmental health risk. In addition, all materials at the project site would be handled, stored, and disposed of in accordance with applicable federal, State, and local standards and regulations. Furthermore, construction and operation of the proposed project would be subject to ministerial permits and regulations, including Fresno County grading permits and SJVAPCD and CARB regulations to control fugitive dust, emissions from diesel engines, and truck idling. Therefore, the proposed project would not result in the emission of hazardous materials or acutely hazardous substances in the vicinity of a school, and the impact would be less than significant.

> **Impact HAZ-3:** The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
>
> **Level of Significance Without Mitigation:** Less Than Significant

d. Would the project be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

Under Government Code Section 65962.6, the DTSC is required to compile and update the Cortese List, which provides information about the location of hazardous materials release sites. As shown in

Table 4.9.A above, there are no active sites or open cases for hazardous materials listed in the Cortese List within the project site or within a 2-mile radius of the project site. The nearest active sites or open cases for hazardous materials are located in Mendota, approximately 8 miles northeast from the project site. As a result, implementation of the proposed project would not create a significant hazard to the public or the environment through proximity to a hazardous material site, and the impact would be less than significant.

Impact HAZ-4: The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

Level of Significance Without Mitigation: Less Than Significant

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?

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport. The nearest airports to the project site include William Robert Johnston Airport, located 9.2 miles northeast of the project site, and Firebaugh Airport, located 12 miles northeast of the project site. The nearest medical center helipad to the project site is in the Community Regional Medical Center, located approximately 45 miles northeast from the project site in Fresno.[6]

The Fresno County Airport Land Use Compatibility Plan (ALUCP) establishes the planning boundaries for airport facilities in the County that define safety areas, noise contours, and height/airspace protection for policy implementation and areas within which notification is required as part of real estate transactions. The ALUCP is intended to protect and promote the safety and welfare of residents, businesses, and airport users near the public use airports and Naval Air Station Lemoore in Fresno County, while supporting the continued operation of these facilities. Specifically, the plan seeks to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, protect the public from the adverse effects of airport noise, and ensure that no structures or activities encroach upon, or adversely affect, the use of navigable airspace.

The project site is not located within 2 miles of a public use airport or helipad, or within an airport's ALUCP safety compatibility or noise contour zone. Furthermore, due to the distance from existing airports and helipads, the proposed project would not conflict with operations at these facilities or result in a safety hazard or excessive noise for people working in the project area. Therefore, hazards associated with airports or with conflicts with an airport's land use plan would be considered less than significant.

[6] California Department of Transportation (Caltrans). 2019. Caltrans HeliPlates. Website: https://heliplates.dot.ca.gov/# (accessed April 2022).

Impact HAZ-5: For a project located within an airport land use plan or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the proposed project would not expose people residing or working in the project area to excessive noise levels.

Level of Significance Without Mitigation: Less Than Significant

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The County of Fresno General Plan does not contain a County-wide emergency evacuation plan or identifies roadways designated for emergency evacuation. However, the proposed project would not result in the closure of adjacent roadways, restrict access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations. Heavy construction-related vehicles could temporarily interfere with emergency response to the project site or emergency evacuation procedures in the event of an emergency (e.g., by slowing traffic traveling behind construction trucks); however, given that there are limited businesses and residences and no emergency response stations in the project vicinity, it is not considered likely that project-related traffic would result in inadequate emergency access or response time. Therefore, impacts related to interference with adopted emergency response plan or evacuation plan would be considered less than significant.

Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Level of Significance Without Mitigation: Less Than Significant

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project site is located in an area mapped by CAL FIRE as Local Responsibility Area (LRA) Unzoned, indicating that the area is urbanized and not susceptible to wildland conflagrations, and is not located within a Very High Fire Hazard Severity Zone (VHFHSZ) or in the vicinity of a VHFHSZ.[7] The project site would comply with County fire safety regulations for project design, construction and operation, including regulations outlined in Section 4.9.2, Regulatory Setting. Therefore, the implementation of the proposed project would not expose people or structures to a significant loss, injury, or death involving wildland fires, and the impact would be less than significant.

Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Level of Significance Without Mitigation: Less Than Significant

[7] California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fresno County State Responsibility Area Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/ (accessed April 2023).

4.9.3.3 Cumulative Impacts

The scope for considering cumulative impacts to hazards and hazardous materials is generally site-specific rather than cumulative in nature because each project site has different hazardous considerations that would be subject to review.

Construction and operation of the proposed project would involve the transport, handling, and storage of hazardous materials (e.g., paints, cleaning agents, fuels, and solvents); however, as described in Section a above, the project would not require use of large amounts of acutely hazardous substances, and usage of hazardous materials for the project would be subject to federal, State, and local regulations, as included in Section 4.9.2, Regulatory Setting. As such, the proposed project would not result in the accidental release of hazardous materials, or expose people or the environment to substantial quantities of acutely hazardous materials, and impacts would be less than significant.

The proposed project is not located within 2 miles of a school and as such would not emit or handle hazardous materials within proximity of a school. There are no active Cortese List hazardous sites within or in the vicinity of the project site, as indicated in Table 4.9.A. The project site is not located in a VHFHSZ and would not expose people or structures to fire hazards. The project site is also not located within 2 miles of an airport or within an ALUCP safety compatibility or noise contour zone, and as such would not expose people working on the site to aircraft-related hazards. The proposed project would also not impede circulation of emergency response vehicles by blocking adjacent roadways or permanently slowing down traffic in the vicinity. Therefore, the proposed project's contribution to cumulative impacts associated with hazards and hazardous materials would be considered less than significant.

> **Impact HAZ-8:** The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to hazards and hazardous materials.
>
> **Level of Significance Without Mitigation:** Less Than Significant

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4.10 HYDROLOGY AND WATER QUALITY

This section describes the regulatory framework and existing conditions within the project site and the potential impacts on hydrology and water quality resulting from implementation of the proposed project. Information in this section is based on the following documents:

- County of Fresno, General Plan, General Plan Environmental Impact Report (EIR), Background Report[1]
- Westside Subbasin Groundwater Sustainability Plan (GSP)[2]
- California Regional Water Quality Control Board Central Valley Region (RWQCB), Water Quality Control Plan (Basin Plan)[3]
- Valley Science and Engineering, Technical Report for the Report of Waste Discharge[4] (provided in Appendix G)
- Well Completion Report[5] (provided in Appendix H)

4.10.1 Environmental Setting

4.10.1.1 Project Area

As described in Chapter 3.0, Project Description, of this EIR, the 98-acre project site is located in western Fresno County, approximately 8 miles southwest of the City of Mendota, and is used for agricultural activities. The hydrologic setting described below pertains to the project area.

4.10.1.2 Hydrologic Features

Local Surface Waters and Drainage. The two major rivers in Fresno County are the Kings River and the San Joaquin River. The San Joaquin River originates in the Sierra Nevada Mountain Range and flows westward dividing Fresno County and Madera County. The North and Middle Forks of the San Joaquin River originate in Madera County near Devils Postpile National Monument. The South Fork begins at Martha Lake in northern Kings Canyon National Park within Fresno County. Friant Dam, an agricultural irrigation dam built by the United States Bureau of Reclamation, is one of the most significant dams built along the San Joaquin River. The Kings River originates high in the Sierra Nevada Mountains near the Inyo County line. It has a large drainage basin including most of Kings

1 County of Fresno. 2000. 2000 Fresno County General Plan. Website: https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps (accessed May 2023).

2 Westlands Water District GSA and County of Fresno GSA - Westside. 2022. Westside Subbasin Groundwater Sustainability Plan. July.

3 California Regional Water Quality Control Board, Central Valley Region (RWQCB). 2019. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region. Website: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201902.pdf (accessed May 2023).

4 Valley Science and Engineering. 2022. Technical Report for the Report of Waste Discharge, Pistachio Processing Facility. S. Stamoules, Inc., Mendota, CA. June.

5 California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.

Canyon National Park and most of the area between Shaver and Florence Lakes in the north to the Fresno/Tulare County border in the south. The upper reaches of Kings River feed into Pine Flat Lake, a 1,000,000 acre-feet reservoir constructed by the United States Army Corps of Engineers (USACE) in 1944. Western Fresno County also contains five major stream systems: Little Panoche Creek, Panoche Creek, Tumey Gulch and Arroyo Ciervo, Cantua Creek, and Arroyo Pasajero. The project site is located approximately 3.2 miles southeast of Panoche Creek, approximately 10 miles southwest of Fresno Slough, a distributary of the Kings River, and approximately 10.6 miles southwest of the San Joaquin River.

Groundwater. The project site is located within the Westside Subbasin (Subbasin), of the San Joaquin Valley Groundwater Basin (Basin). The Subbasin is bordered by the Diablo Range to the west, Pleasant Valley Subbasin to the southwest, Tulare Lake Subbasin to the south, the Kings Subbasin to the east, and the Delta-Mendota Subbasin to the east and north. Groundwater levels in the Subbasin were at their lowest in the 1960s, prior to importation of surface water. The Central Valley Project began delivering surface water to the San Luis Unit in 1967-68, and water levels gradually increased to a maximum in 1987-88, with fluctuations since then. The Westside Subbasin has been identified by the California Department of Water Resources (DWR) as a critically overdrafted subbasin.

Flooding Control.

Flood Zones. Flooding in Fresno County can occur primarily along the Kings River, along Dry Creek, and some sections of the San Joaquin River on the central and eastern parts of the County. Flood zone mapping by the Federal Emergency Management Agency (FEMA) indicates that the proposed project is not within a 100, 200 or 500-Year Floodplain Area.[6,7]

Dam Inundation. The DWR records 33 dams within Fresno County. Of these, the three major dams that could cause substantial flooding in the County in case of a failure include Friant Dam, Big Dry Creek Dam and Pine Flat Dam. According to Figure 9-8, Dam Failure Flood Inundation Areas, of the General Plan Background Report,[8] the project site is not located within a potential dam inundation area.

Seiches. Seiches are surface waves with longer periods of water-level oscillations within a lake, bay, or estuary typically caused by earthquakes, wind, or changes in atmospheric pressure.[9] Once the forces stop, water rebounds to the other side of the enclosed area and oscillates back and forth for a given amount of time (typically hours) based on the size and volume of the water

6 California Department of Water Resources (DWR). n.d. Best Available Map. Website: https://gis.bam.water.ca.gov/bam/ (accessed June 28, 2022).

7 Federal Emergency Management Agency (FEMA). 2020. FEMA Flood Map Service Center: Search By Address. Website: https://msc.fema.gov/portal/search?AddressQuery#searchresultsanchor (accessed April 8, 2022).

8 County of Fresno. 2000. Background Report. Figure 9-8: Dam Failure Flood Inundation Areas. p. 9-12. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/8398-background_report_june04.pdf (accessed October 2023).

9 United States Geological Survey (USGS). n.d. Seismic Seiches. Website: https://www.usgs.gov/programs/earthquake-hazards/seismic-seiches (accessed May 2023).

body. The project site is not in the vicinity of a body of water substantial enough to experience seiches.

Tsunamis. A tsunami is an ocean wave caused by sudden large-scale displacement on the ocean floor and is associated with large earthquakes.[10] The project site is located approximately 74 miles inland from the Pacific Ocean. Therefore, the chances of a tsunami impacting the project site are negligible.

Mudflows. A mudflow is type of landslide composed of saturated fine-grained earth materials with a wet cement consistency.[11] The project site is relatively flat, and there are no slopes on or immediately near the project site steep enough to experience mudslides.

4.10.2 Regulatory Setting

4.10.2.1 Federal Regulations

Clean Water Act. The Clean Water Act (CWA), enacted in 1977, provides the framework for regulating discharges of pollutants into water and regulating surface water quality standards. The United States Environmental Protection Agency (EPA) is the federal responsible agency and is authorized under the CWA to implement water-quality regulations to reduce water contamination and restore the integrity of the nation's waters. Under Section 402(p) of the CWA, otherwise known as the National Pollutant Discharge Elimination System (NPDES), stormwater discharges are regulated to prevent water pollution. California has an approved State NPDES program and the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) implement the program.

The CWA, under Section 303(d) also requires each state identify water bodies or segments of water bodies that are considered "impaired" as they do not meet one or more of the water-quality standards established by the State. Impaired waters are considered polluted and need further attention to support their beneficial uses. A Total Maximum Daily Load (TMDL) must be established for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water-quality standards. Categories 5, 4a, and 4b are considered part of Section 303(d), indicating water quality parameters are not being met. Section 401 requires a federal permit if an activity may result in discharge to "waters of the United States". Discharge must comply with other provisions of the act. Discharging other pollutants into waters of the United States are covered in Sections 402 and 403.

National Pollutant Discharge Elimination System (NPDES) Permit. Section 402 of the CWA established the NPDES to control water pollution by regulating point sources that discharge pollutants into waters of the United States. In the State of California, the EPA has authorized the SWRCB as the permitting authority to implement the NPDES program. The SWRCB issues two-

[10] United States Geological Survey (USGS). n.d. What are tsunamis? Website: https://www.usgs.gov/faqs/what-are-tsunamis#:~:text=Tsunamis%20are%20ocean%20waves%20triggered,Volcanic%20eruptions (accessed May 2023).

[11] Colorado Geological Survey. n.d. Debris and Mud Flows. Website: coloradogeologicalsurvey.org/hazards/debris-flows/ (accessed March 8, 2022).

baseline general permits; one for industrial operations, the other for construction activities (Construction General Permit). Additionally, the NPDES program includes the regulation of stormwater discharges from cities, counties, and other municipalities under Order No. R8-2009-0030 (waste discharge requirements for stormwater) and updated under Order No. 5-01-048 for the Central Valley Region.

Under the Construction General Permit, stormwater discharges from construction sites with a disturbed area of one or more acres are required to obtain either individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent (NOI) with the SWRCB. Each applicant under the Construction General Permit is required to both prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to the commencement of grading activities and to ensure implementation of the SWPPP during construction activities. The primary objective of the SWPPP is to identify, construct, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction activities. BMPs may include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. The SWPPP would also address BMPs developed specifically to reduce pollutants in stormwater discharges following the completion of construction activities.

The NPDES program also includes regulations for discharging limited threat wastewater to waters of the United States under Order No. R5-2022-0006. “Limited threat” wastewater refers to clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. Limited threat wastewater includes water from the following sources:

- Well Development Water
- Construction Dewatering
- Pump/Well Testing
- Pipeline/Tank Pressure Testing
- Pipeline/Tank Flushing or Dewatering
- Condensate
- Water Supply System
- Aggregate Mine
- Filter Backwash Water

National Flood Insurance Program. The National Flood Insurance Act passed in 1968 and is mandated by FEMA to evaluate flood hazards. The Flood Disaster Protection Act of 1973 also supports this act. Flood Insurance Rate Maps (FIRMs) for local and regional planners are provided by FEMA to promote sound land use and floodplain development and identify potential flood areas based on current conditions. Flood Insurance Studies are conducted by FEMA engineers and cartographers in order to delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

4.10.2.2 State Regulations

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California’s waters through water allocation and water quality protection. The SWRCB implements the requirement of the CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the

responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting waste discharge requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits regulating discharges to waters of the United States. The project site is located within a portion of the state regulated by the Central Valley RWQCB.

Clean Water Act, Section 303, List of Impaired Water Bodies. CWA Section 303(d) requires states to develop a list of surface water bodies that do not meet water quality standards (called the 303(d) list), and to establish pollutant load reduction targets (TMDLs) or equivalent alternative control programs necessary to attain water quality standards. TMDLs establish numeric targets to attain applicable water quality standards, establish waterbodies maximum allowable pollutant loads consistent with those targets, and allocate allowable loads among the pollutant sources. In California, TMDLs must include implementation plans to achieve pollutant load reductions.

California Toxics Rule (CTR). Because California had not established a complete list of acceptable water quality criteria for toxic pollutants, EPA Region IX established numeric water quality criteria for toxic constituents in the form of the CTR. The CTR provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The CTR is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the CTR criteria do not apply directly to discharges of stormwater runoff, they are utilized as benchmarks for toxics in urban runoff. The CTR is used as a benchmark to evaluate the potential ecological impacts of stormwater runoff to receiving waters. The CTR establishes acute and chronic surface water quality standards for certain water bodies. Acute criteria provide benchmarks for the highest permissible concentration below which aquatic life can be exposed for short periods of time without negative effects. Chronic criteria provide benchmarks for an extended period of time (i.e., 4 days or more) without negative effects. The acute CTR criteria have a shorter relevant averaging period (less than 4 days) and provide a more appropriate benchmark for comparison for stormwater flows.

CTR criteria apply to the receiving water body and are calculated based on the probable hardness values of the receiving waters. At higher hardness values for receiving waters, certain constituents (including copper, lead, and zinc) are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

Statewide Construction General Permit. The General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit) requires construction projects of 1 acre or more to file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a NOI, risk assessment, site map, SWPPP, annual fee, and a signed certification statement. The SWPPP must demonstrate conformance with applicable BMPs, including a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and

drainage patterns across the project area. BMPs must be listed within the SWPPP that would prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. SWPPP also addresses BMP failure by requiring a visual monitoring program, chemical monitoring program for nonvisible pollutants, and a sediment monitoring plan in case the site discharges directly to a water body listed on the 303(d) list for sediment. There are several categories of construction BMPs. The following categories of construction BMPs are relevant to prevent stormwater discharge:

- **Erosion Controls:** Cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind. Examples include mulch, geotextiles, mats, hydroseeding, earth dikes, and swales.

- **Sediment Controls:** Filter out soil particles that have been detached and transported in water. Examples include barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; and cleaning measures such as street sweeping.

- **Tracking Controls:** Minimize the tracking of soil off-site by vehicles. Examples include stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.

- **Waste Management and Controls (housekeeping):** Management of materials and wastes to avoid contamination of stormwater. Examples include spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

California Code of Regulations (CCR) – Title 22. CCR Title 22 refers to state guidelines for how treated and recycled water is discharged and used. State discharge standards for recycled water and its reuse are regulated by the Porter-Cologne Act and the SWRCB. The SWRCB governs the permitting of recycled water projects, develops uniform water recycling criteria and reviews and approves Title 22 engineering reports for recycled water use. Recycled water treatment standards are set and enforced by the State's nine RWQCBs in consultation with the California Department of Public Health.

Sustainable Groundwater Management Act (SGMA). The California legislature passed the SGMA in September 2014 to establish new measures for groundwater management and regulation statewide by providing sustainable local control of groundwater resources. Under SGMA, local agencies must establish governance of their subbasin by forming Groundwater Sustainability Agencies (GSAs) that have been given the authority to develop, adopt, and implement a Groundwater Sustainability Plan (GSP) for the sub-basin. GSAs must define and monitor groundwater conditions in the subbasin and set and achieve sustainable groundwater management within 20 years of adopting the GSP. The proposed project is located within the jurisdiction of the Westland Water District GSA.

Urban Water Management Planning Act. The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires publicly or privately owned water suppliers that provide more than 3,000 acre-feet of water annually or supply more than 3,000 customers to prepare a plan that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period in 5-year increments.

- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.

- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 [SBX7-7]), which amends the act and adds new water conservation provisions to the Water Code

Senate Bill 610. Senate Bill (SB) 610 made changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current DWR publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that the lead agency for certain projects subject to the California Environmental Quality Act (CEQA) obtain a water supply assessment from a public water system as specified in the law.

Water Discharge Requirements. The Central Valley RWQCB typically requires a Waste Discharge Requirements (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the Central Valley RWQCB.

The NPDES serves as the WDR. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the Central Valley RWQCB in order to obtain a WDR. For specific situations, the Central Valley RWQCB may waive the requirement to obtain a WDR for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR.

4.10.2.3 Regional Regulations

Regional Water Quality Control Board – Central Valley Region.

Water Quality Control Plans (Basin Plans). Basin Plans provide the foundation for all Central Valley Water Board regulatory actions. Basin Plans identify beneficial uses of surface and groundwaters, water quality objectives to protect those uses, implementation actions to achieve objectives and a monitoring and surveillance program to ensure implementation actions are effective. There are two Basin Plans for the Central Valley Region, one for the Sacramento and San Joaquin River Basins, and one for the Tulare Lake Basin. The project site is located in the San Joaquin River Basin and is subject to the Sacramento River Basin and the San Joaquin River

Basin Plan. The San Joaquin River Basin covers 15,880 square miles and includes the entire area drained by the San Joaquin River.

Beneficial Uses of the Receiving Waters. For groundwater, the following beneficial uses have been identified and occur throughout the Basin:

Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), and Industrial Process Supply (PRO).

- **Municipal and Domestic Supply (MUN):** Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.
- **Agricultural Supply (AGR):** Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- **Industrial Service Supply (IND):** Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
- **Industrial Process Supply (PRO):** Uses of water for industrial activities that depend primarily on water quality.

Water Quality Objectives for Inland Surface Waters. The water quality objectives below apply to all surface waters in the Sacramento and San Joaquin River Basins. The water quality objectives below are presented by categories which were standardized for uniformity among the regional water boards:

- **Bacteria:** In waters designated for Contact Recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 milliliters (mL), nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 mL.
- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- **Chemical Constituents:** At a minimum, water designated MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of CCR Title 22, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the

changes take effect. At a minimum, water designated MUN shall not contain lead in excess of 0.015 milligrams per liter (mg/L).

- **Cryptosporidium and Giardia:** Waters shall not contain Cryptosporidium and Giardia in concentrations that adversely affect the public water system component1 of the MUN beneficial use.

- **Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.

- **Dissolved Oxygen:** Within the legal boundaries of the Delta, the dissolved oxygen concentration shall not be reduced below: 7.0 mg/L in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge; 6.0 mg/L in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and 5.0 mg/L in all other Delta waters except for those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use. For surface water bodies outside the legal boundaries of the Delta, the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time: Waters designated WARM: 5.0 mg/L; Waters designated COLD: 7.0 mg/L; Waters designated SPWN: 7.0 mg/L.

- **Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

- **Methylmercury:** For the Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in Appendix 43, the average methylmercury concentrations shall not exceed 0.08 and 0.24 milligram per kilogram (mg/kg), wet weight, in muscle tissue of trophic level 3 and 4 fish, respectively (150-500 millimeters [mm] total length). The average methylmercury concentrations shall not exceed 0.03 mg/kg, wet weight, in whole fish less than 50 mm in length.

- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

- **Potential Hydrogen (pH):** The pH of water shall not be depressed below 6.5, raised above 8.3.

- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the

water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer. Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 Code of Federal Regulations (CFR) Section 131.12.) or the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the MCLs set forth in CCR Title 22, Division 4, Chapter 15, and shall not contain concentrations of thiobencarb in excess of 1.0 micrograms per liter (µg/L).

- **Radioactivity:** Radionuclides shall not be present in concentrations that are harmful to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. At a minimum, waters designated MUN shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 64442 of Section 64442 and Table 64443 of Section 64443 of CCR Title 22.

- **Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources.

- **Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

- **Suspended Material:** Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.

- **Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

- **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Water Quality Objectives for Ground Waters. The following objectives apply to all ground waters in the San Joaquin River Basin:

- **Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2/100 mL.

- **Chemical Constituents:** At a minimum, waters designated MUN shall not contain concentrations of chemical constituents in excess of the MCLs specified in the following provisions of CCR Title 22, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. At a minimum, water designated MUN shall not contain lead in excess of 0.015 mg/L.

- **Radioactivity:** At a minimum, ground waters designated MUN shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 64442 of Section 64442 and Table 64443 of Section 64443 of CCR Title 22, which are incorporated by reference into this plan.

- **Tastes and Odors:** Ground waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

- **Toxicity:** Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s). This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.

4.10.2.4 Local Regulations

Fresno County Code of Ordinances.¶ Chapter 14.24, Regulation of Stormwater Discharges, establishes stormwater discharge provisions and management measures to prevent pollution in stormwater. This order authorizes the County to adopt and impose best management practices; to require remediation, monitoring and analysis of discharges; establishes a requirement to notify authorities of releases; and authorizes County's access, inspection, sampling, installation or establishment of sampling devices, and testing. Chapter 15.28, Grading and Excavation, provides the County's grading and excavation requirements as outlined in the Code of Ordinances, the 2022 California Building Code (CBC) and Chapter 4, Division 4.1 of the California Green Building Standards Code (CALGreen Code).

Fresno County General Plan. The Fresno County General Plan is the official policy statement to guide development (both public and private) in the County. The General Plan policies included in Table 4.10.A address hydrology and water quality. General Plan policies applicable to the proposed project are included in Table 4.10.A.

Table 4.10.A: Fresno County General Plan Policies Related to Hydrology and Water Quality

Policy/Action Item No.	Policy
Public Facilities and Services Element	
Policy PF-C.12	The County shall approve new development only if an adequate sustainable water supply to serve such development is demonstrated.
Policy PF-C.13	The County shall limit development in areas identified as having severe groundwater level declines or limited groundwater availability to uses that do not have high water usage or can be served by a surface water supply.
Policy PF-C.14	The County shall require that water supplies serving new development meet US Environmental Protection Agency and California Department of Health Services and other water quality and quantity standards.
Policy PF-C.16	If the cumulative effects of more intensive land use proposals are detrimental to the water supplies of surrounding areas, the County shall require approval of the project to be dependent upon adequate mitigation. The County shall require that costs of mitigating such adverse impacts to water supplies be borne proportionately by all parties to the proposal
Policy PF-C.17	The County shall, prior to consideration of any discretionary project related to land use, undertake a water supply evaluation. The evaluation shall include the following: a. A determination that the water supply is adequate to meet the highest demand that could be permitted on the lands in question. If surface water is proposed, it must come from a reliable source and the supply must be made "firm" by water banking or other suitable arrangement. If groundwater is proposed, a hydrogeologic investigation may be required to confirm the availability of water in amounts necessary to meet project demand. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required. b. A determination of the impact that use of the proposed water supply will have on other water users in Fresno County. If use of surface water is proposed, its use must not have a significant negative impact on agriculture or other water users within Fresno County. If use of groundwater is proposed, a hydrogeologic investigation may be required. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required. Should the investigation determine that significant pumping-related physical impacts will extend beyond the boundary of the property in question, those impacts shall be mitigated. c. A determination that the proposed water supply is sustainable or that there is an acceptable plan to achieve sustainability. The plan must be structured such that it is economically, environmentally, and technically feasible. In addition, its implementation must occur prior to long-term and/or irreversible physical impacts, or significant economic hardship, to surrounding water users.
Policy PF-C.25	The County shall require that all new development within the County use water conservation technologies, methods, and practices as established by the County
Policy PF-E.11	The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.
Policy PF-E.16	The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

Table 4.10.A: Fresno County General Plan Policies Related to Hydrology and Water Quality

Policy/Action Item No.	Policy
Open Space and Conservation Element	
Policy OS-A.21	The County shall protect groundwater resources from contamination and overdraft by pursuing the following efforts: a. Identifying and controlling sources of potential contamination; b. Protecting important groundwater recharge areas; c. Encouraging water conservation efforts and supporting the use of surface water for urban and agricultural uses wherever feasible; d. Encouraging the use of treated wastewater for groundwater recharge and other purposes (e.g., irrigation, landscaping, commercial, and non-domestic uses); e. Supporting consumptive use where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface. water supply to the same area; f. Considering areas where recharge potential is determined to be high for designation as open space; and g. Developing conjunctive use of surface and groundwater.
Policy OS-A.27	In areas with increased potential for groundwater degradation (e.g., areas with prime percolation capabilities, coarse soils, and/or shallow groundwater), the County shall only approve land uses with low risk of degrading groundwater.

Source: General Plan (County of Fresno 2000).

4.10.3 Impacts and Mitigation Measures

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

4.10.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in a substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.3.2 Project Impacts

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

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project would include construction activities (e.g., clearing, grading, excavation) that could impact surface water in the project area through soil erosion and increased sediment and debris discharged into runoff. Other risks to groundwater and surface water quality include construction materials that would be present onsite such as fuels, paints, and solvents. Construction materials and equipment that are temporary stored in work areas or staging areas have the potential to release hazardous materials, sediments, or trash into nearby waters.

Pollutants of Concern from Project Construction. The following contaminants may be released during construction of the proposed project, and may contaminate stormwater: sediment, nutrients, bacteria and viruses, oil and grease, metals, organic (carbon-based) compounds, oxygen-demanding substances, pesticides, and trash and debris.

It should be noted organic compounds are found in pesticides, solvents, and hydrocarbons. To further clarify, oxygen-demanding substances include proteins, carbohydrates, and fats caused by microbial degradation which increases oxygen demand when in water.

Construction Impacts. Construction activities that disturb more than 1 acre of land are required to comply with the SWRCB's NPDES permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit). Development of the proposed

project would disturb approximately 93.5 acres of land[12] and as such, the project requires compliance with the Construction General Permit. The Construction General Permit would require the development of a SWPPP, and implementation of BMPs to ensure that construction practices include measures to address erosion and protect water quality. Construction BMPs would include, but not be limited to, erosion and sediment control, designed to minimize erosion and retain sediment on site, and good housekeeping practices to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. Additionally, the project construction would require compliance with Chapter 14.24 of the Fresno County Code of Ordinances through implementation of an erosion control plan that complies with applicable entitlements and building permits as required by the Fresno County Code of Ordinances, including provisions for erosion and sediment control, through appropriate BMPs to protect water quality during construction activities.

Additionally, although dewatering activities are not anticipated to be required during project construction based on the 378-feet depth of groundwater at the project site[13], the project would be subject to NPDES Permit CAG995002, Waste Discharge Requirements (WDRs) for Limited Threat Discharges to Surface Water (Order R5-2022-0006), if dewatering required during project construction. The WDRs for Limited Threat Discharges to Surface Water require compliance with established TMDLs and water quality screening parameters for limited threat discharges such a construction wastewater discharges. Thus, compliance with the General Construction Permit, the County's Code of Ordinances, and the Limited Threat Discharges to Surface Water WDR would ensure implementation of project-specific BMPs to preserve surface water and groundwater quality, as well as compliance with applicable point source pollution programs. Therefore, construction impacts on surface and groundwater quality would be less than significant.

Operational Impacts. The long-term operation of the proposed project could result in long-term impacts to surface water quality from stormwater runoff. The proposed project would result in the introduction of approximately 93.5 acres of impervious areas associated with site improvements. Runoff from impervious surfaces typically contains oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals) and other pollutants. Precipitation could potentially displace these pollutants into stormwater and could result in potential impacts to surface water and ground water quality. Additionally, the introduction of 93.5 acres of impervious surfaces would decrease the infiltration capacity of the site, resulting in an increase of volume and rate of stormwater runoff from the project site.

The proposed project consists of an agricultural processing facility that would manage stormwater generated at the project site internally. The proposed project would be designed to collect and direct stormwater and other runoff from the site towards an infiltration basin located in the northwest portion of the project site, approximately 3,000 feet northwest of West Panoche Road. Proposed stormwater collection and drainage infrastructure on the site would include inlets, catch basins, underground stormwater pipelines and an infiltration basin constructed on the northwest portion of the site.

12 Refer to Appendix B of this EIR for estimated construction disturbance area in the project site.
13 County of Fresno. September 13, 2023. Ejaz Ahmad, Planner, personal communication.

The proposed project would be subject to post-construction stormwater performance standards required by the Construction General Permit, which require the proposed project to replicate the pre-project water balance (volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event or the smallest precipitation event that generates runoff, whichever is larger; ensure that post-project runoff time of concentration is equal to or greater than pre-project time of concentration; as well as implement BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed at the project site. The Project Applicant would be required to prepare a post-construction water quality management plan that fulfills the Construction General Permit requirements. Post-construction BMPs, drainage plans, calculations, and other supporting documentation would be subject to review by the RWQCB to ensure compliance with the permit. Additionally, in compliance with Fresno County project review requirements, the Project Applicant would be required to prepare a grading and drainage plan that outlines the design specifications of the proposed inlets, catch basins, underground stormwater pipelines and infiltration basin for the site. The proposed grading and drainage plan would be prepared by a California-licensed Civil Engineer or Architect, be compliant with Fresno County Improvement Standards[14] for drainage systems in unincorporated Fresno County, and comply with grading specifications outlined in Chapter 15.28 of the Fresno County Code of Ordinances. As such, with compliance with Fresno County project review requirements and post-construction standards of the General Construction Permit, stormwater from the project site would not affect local surface or groundwater quality, and impacts would be less than significant.

The project also proposes the collection, filtering and reuse of process wastewater from operation of the pistachio processing facility for crop irrigation of surrounding orchards. The proposed project would generate approximately 311.4 million gallons of process wastewater annually after buildout of Phase IV. The process wastewater from the pistachio processing facility would first be pumped through screen filters to remove organic debris, then would be directed towards settling ponds onsite for the removal of additional impurities, and finally would be pumped via an existing water delivery system and distributed via drip irrigation towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards. This proposed process wastewater discharge is expected to mainly occur in September and October, during the peak pistachio harvest season. Supplemental irrigation would be required outside of the peak harvest season to meet crop demands.

Given that the proposed discharge of process wastewater could potentially affect the quality of the waters of the state, the Project Applicant would be required the obtain WDR issued by the Central Valley RWQCB. The Project Applicant would be required to prepare and submit a completed Application/Report of Waste Discharge General Information Form for Waste Discharge

[14] County of Fresno. 1966. Improvement Standards for Fresno County. October. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/grading/fresnoco.imp.standards10-66.pdf (accessed October 2023).

Requirements [Form 200 (10/97)][15] with the necessary supplemental information characterizing the proposed project, project location and discharge type.

In support of the WDR Application, a Technical Report for the Report of Waste Discharge (Waste Discharge Report) was prepared by Valley Science and Engineering on June 2022 for the proposed project (See Appendix G of this EIR). The Waste Discharge Report estimated that the process wastewater from the project would have a pH of 5.0, an electrical conductivity (EC) of 4,343 micromhos per centimeter (µmhos/cm) and the following approximate concentrations for the following constituents: 130 milligrams per liter (mg/L) of total nitrogen, 115 mg/L of chloride, 713 mg/L of potassium, 3,773 mg/L of Biochemical Oxygen Demand (BOD) and 3,980 mg/L of Total Dissolved Solids (TDS).

The Waste Discharge Report determined that the characteristics and estimated concentration of constituents in the project's process wastewater are within the common range seen in similar pistachio processing facilities with WDR issued by the RWQCB. Additionally, based on the nature of the constituents in the discharge wastewater, the estimated nutrient uptake assigned to pistachio crops, the controlled dosing of process wastewater that would occur via the existing drip irrigation system on the discharge area, and the estimated two-month discharge period for the process wastewater, the Waste Discharge Report identifies a low risk to groundwater quality associated with the proposed discharge.

Additionally, the Waste Discharge Report also evaluated the capacity of the approximately 3,700-acre discharge area of receiving the hydraulic load associated with the discharge of 311.4 million gallons of process wastewater through water balance calculations that assessed the area's crop evapotranspiration rate, precipitation rate, water availability and soil water holding capacity. Furthermore, for precipitation considerations, 100-year return high precipitation and 30-year annual average precipitation scenarios were evaluated. The Waste Discharge Report concluded that under both precipitation scenarios the proposed 3,700-acre discharge area would have sufficient capacity to receive the hydraulic load associated with the process wastewater discharge.

The Project Applicant would be required to submit a completed WDR Application to the RWQCB prior to approval of the project. The application of process wastewater on the discharge area would not be permitted until the Project Applicant provides a Notice of Adoption of the WDR issued by the RWQCB to the County of Fresno, or a designee, to demonstrate proof of coverage under the WDR. Additionally, the Project Applicant would be required to prepare and submit a Wastewater and Nutrient Management Plan to the RWQCB for approval within 180 days of the issuance of the project WDR. The Wastewater and Nutrient Management Plan would ensure compliance with the WDR and would include procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, and calculations for monthly and annual water and nutrient balances, to safeguard water quality in the region.

[15] Regional Water Quality Control Board (RWQCB). n.d. Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements or NPDES Permit [Form 200 (10/97)]. Website: https://www.waterboards.ca.gov/publications_forms/forms/docs/form200.pdf (accessed October 2023).

As discussed in Section 4.14, Utilities and Service Systems, sewage wastewater generated onsite would be managed through installation of a septic system designed and installed pursuant to regulations and required permits from the Fresno County Department of Public Works and Planning. Furthermore, as described in Section 4.9, Hazards and Hazardous Materials, the proposed project would implement applicable federal, state, and local laws and regulations to store, handle, and dispose of hazardous materials to prevent accidental release of hazardous substances into surface water and groundwater sources. Therefore, the discharge of process wastewater and stormwater infiltration onsite would not lower the quality of surface and groundwater.

As such, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and impacts would be less than significant levels.

Impact HYD-1: The project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Level of Significance Without Mitigation: Less Than Significant

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Most of the water used at the project site would be used during the peak of the harvest season, which occurs between September and October. It is anticipated that Phase I of the proposed project would require between 1,000 and 1,250 gallons per minute (gpm) of water for processing during the peak harvest season, totaling 78.03 million gallons (239.5 acre-feet) annually. By Phase IV, the proposed project is expected to use between 4,000 and 5,000 gpm of water during the peak harvest season, which equates to approximately 311.4 million gallons (955.5 acre-feet) annually.

Water for both the proposed project's processes and for fire suppression would be supplied by an existing deep irrigation well located on the northwest quadrant of the site. A Well Completion Report[16] prepared for the existing onsite well in 2015 identified that the well's yield capacity is approximately 1,800 gpm. Additionally, current readings for this well measured in August 2023 have identified water level at the well starting at a depth of approximately 378 feet.[17] As previously discussed, it is estimated that the project would require a total annual water supply of 78.03 million gallons or 239.5 acre-feet to serve the project site during Phase I. Based on estimated water yield for the existing well onsite described in the Well Completion Report, the project would have sufficient capacity to meet projected water demands during Phase I. Additionally, a new domestic well would be developed on the project site for potable water purposes, which would further offset project water needs.

By Phase IV, it is estimated that the project would require a total annual water supply of 311.4 million gallons or 955.5 acre-feet to serve the project site. Given that most of the water used at the

[16] California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.

[17] County of Fresno. September 13, 2023. Ejaz Ahmad, Planner, personal communication.

project site would be used over a six-week period between September and October, during peak harvest season, the existing groundwater well with the 1,800 gpm pumping capacity is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two 500,000-gallon storage tanks for operational water retention.[18]

The project would require groundwater extraction, which would reduce groundwater supplies in the project area. However, groundwater extraction for project operation requires compliance with the GSP for the Westside Subbasin[19], which underlies the project site. The GSP sets sustainability goals consistent with sustainable groundwater management criteria designed to help the Subbasin achieve groundwater sustainability within 20 years of the GSP adoption. All jurisdictions located within the Subbasin must comply with the GSP's sustainability goals for groundwater management, which include groundwater allocations that equally distribute the total annual pumping from the Subbasin on the basis of land acreage overlying the Subbasin. The groundwater allocation program includes a "transition period" from 2022-2030, in which a uniform annual allocation is established at 1.3 AFY per acre and then subsequently reduced each year by 0.1 acre-feet per acre until 2030. As discussed in Section 3.0, Project Description, the project site consists of a 98-acre portion of a 316.2-acre parcel, and project construction would begin in 2024 and end in 2031. As such, the groundwater allocation for the Subbasin by buildout of Phase IV would be 0.6 acre-feet per acre, resulting in a total allocation of 189.72 acre-feet per year (AFY) for the project parcel by buildout of Phase IV.

The project would result in the extraction of 311.4 million gallons or 955.5 AFY of groundwater to serve the project site by Phase IV, which would exceed groundwater allocations for the project parcel. However, the Westside Subbasin GSP indicates that "a landowner's groundwater allocation may be augmented through a Groundwater Credit Program which compensates water users that elect to implement groundwater replenishment strategies authorized by the GSA." Allowed groundwater replenishment strategies outlined in the GSP include but are not limited to water conservation, on-farm recharge, sub-lateral over-irrigation, dry well injection, aquifer storage and recovery (ASR) and percolation ponds and basins. As previously discussed in Section a above, the proposed project would include the return of approximately 311.4 million gallons of process wastewater used for operation of the proposed pistachio processing facility to the local aquifer through the surface application of this process wastewater for irrigation of approximately 3,700 acres of pistachio orchards surrounding the project site, subject to the preparation of a WDR Application and the issuance of the Notice of Approval of the project's WDR to the County before surface application of process wastewater begins in the discharge area. As such, the proposed project would include replenishment strategies approved by the GSP that would offset excess groundwater extraction in the project parcel. The Project Applicant would be required to comply with all Westland Water District GSA requirements for the approval of a Groundwater Credit Program. As such, the project would not result in a substantial decrease of groundwater supplies in the Subbasin or interfere substantially with groundwater recharge such that the project may impede

18 County of Fresno. September 13, 2023. Ejaz Ahmad, Planner, personal communication.

19 Westlands Water District GSA and County of Fresno GSA - Westside. 2022. Westside Subbasin Groundwater Sustainability Plan. July.

sustainable groundwater management of the basin. Therefore, impacts would be less than significant.

Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Level of Significance Without Mitigation: Less Than Significant

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- **Result in a substantial erosion or siltation on- or off-site?**
- **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**
- **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? or**
- **Impede or redirect flood flows?**

Result in a substantial erosion or siltation on- or off-site? Erosion is a natural process in which soil is moved from place to place by wind or flowing water. The effects of erosion within the project site can be accelerated by ground-disturbing activities associated with buildout of the proposed project.

Siltation is the settling of sediment to the bed of a stream or lake which increases the turbidity of water. Turbid water can have harmful effects to aquatic life by clogging fish gills, reducing spawning habitat, and suppressing aquatic vegetation growth.

The anticipated buildout of the proposed project would result in the development of approximately 93.5 acres of the existing agricultural land on the project site. Bare soils, common within farmland, are more susceptible to erosion than already developed urban land, thus it is expected erosion would occur onsite. During construction activities and in compliance the General Construction Permit, a project-specific SWPPP with BMPs would be implemented to reduce potential impacts related to erosion and siltation. These BMPs would include, but are not limited to, covering and/or binding soil surfaces to prevent soil from being detached and transported by water or wind, and the use of barriers such as straw bales and sandbags to control sediment. Compliance with requirements of the General Construction Permit would reduce potential impacts related to erosion and saltation to a less-than-significant level. Once developed, the project site would be covered by hardscape, which would minimize the potential for significant soil erosion onsite.

Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? The anticipated buildout of the proposed project would increase the amount of impermeable land surfaces onsite, which would increase runoff from the project site. The proposed project would include stormwater infrastructure, including inlets, catch basins,

underground stormwater pipelines and an infiltration basin to manage stormwater onsite. In compliance with post-construction performance standards of the Construction General Permit, the Project Applicant would be required to prepare and submit a post-construction water quality management plan to the County for approval, which would require the project to replicate the pre-project water balance (volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event or the smallest precipitation event that generates runoff, whichever is larger; ensure that post-project runoff time of concentration is equal to or greater than pre-project time of concentration; as well as implement BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed at the project site. Additionally, in compliance with Fresno County project review requirements, the Project Applicant would prepare a grading and drainage plan that outlines the design specifications of the proposed stormwater infrastructure for the project site. The proposed grading and drainage plan would be prepared by a California licensed Civil Engineer or Architect, be compliant with Fresno County Improvement Standards for drainage systems in unincorporated Fresno County, and would comply with grading specifications outlined in Chapter 15.28 of the Fresno County Code of Ordinances, ensuring that the proposed stormwater infrastructure onsite would have sufficient capacity to handle surface runoff generated on the project site.

Furthermore, as discussed in Section a above, the proposed project would discharge process wastewater generated in operation of the pistachio processing facility towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards through an existing water delivery system, where it would be distributed via drip irrigation. The Project Applicant would be required to obtain WDR issued by the RWQCB and prepare and submit a Wastewater and Nutrient Management Plan to the RWQCB for approval to comply with WDR, with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, and calculations for monthly and annual water and nutrient balances, to ensure that proposed process wastewater application does not surpass the hydraulic loading capacity of the approximately 3,700-acre discharge area. As such, the project would not result in off-site discharges that would result in flooding. Therefore, impacts related to increases of surface runoff rates and subsequent flooding would be less than significant.

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?
Compliance with the General Construction Permit and Chapter 14.24 of the Fresno County Code of Ordinances would require the preparation of BMPs to control erosion and the discharge of pollutants in stormwater runoff as a result of construction activities. Further, if dewatering activities are required during project construction, the Project Applicant would need to obtain coverage under the NPDES Permit CAG995002, WDR for Limited Threat Discharges to Surface Water to ensure that discharge of construction dewatering effluent would not result in impacts to surface or groundwater quality. Additionally, the project would comply with applicable federal, State and local laws and regulations to manage storage, handling, and disposal of hazardous materials to limit sources of polluted runoff from the project site during construction of the project.

Development of the project site would pave approximately 93.5 acres in the project site, which would potentially increase runoff generated onsite. Per the General Construction Permit's post-

construction requirements, the Project Applicant would be required to prepare and submit to the County a post-construction water quality management plan to comply with post-construction stormwater performance standards of the General Construction Permit, which require the project to replicate the pre-project water balance (volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event or the smallest precipitation event that generates runoff, whichever is larger, as well as ensure that post-project runoff time of concentration is equal to or greater than pre-project time of concentration.

Additionally, pursuant to Fresno County requirements, the Project Applicant would be required to prepare a Grading and Drainage Plan that outlines the design specifications of the proposed stormwater infrastructure for the site. The proposed Grading and Drainage Plan would be prepared by a California-licensed Civil Engineer or Architect and be compliant with Fresno County Improvement Standards for drainage systems, ensuring that the proposed stormwater infrastructure onsite would have sufficient capacity to handle surface runoff generated on the project site. As such, stormwater from the project site would not exceed capacity of any existing or planned stormwater drainage system, or provide additional sources of polluted runoff.

Additionally, the project proposes the collection, filtering and reuse of process wastewater from operation of the pistachio processing facility for irrigation of approximately 3,700 acres of pistachio orchard. The surface application of wastewater in the discharge area would be subject to RWQCB approval of the Project Applicant's WDR Application and issuance of the Notice of Approval of the WDR to the County or a designee to demonstrate proof of coverage under the WDR. Furthermore, the Project Applicant would be required to prepare and submit a Wastewater and Nutrient Management Plan to the RWQCB for approval to comply with WDR, with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, and calculations for monthly and annual water and nutrient balances, to ensure that proposed process wastewater application does not surpass the hydraulic loading or nutrient holding capacity of the approximately 3,700-acre discharge area.

Therefore, compliance with regulatory requirements would ensure that the project would not contribute to runoff in excess of capacity of planned stormwater drainage system for the project or provide additional sources of polluted runoff. As such, impacts would be less than significant.

Impede or redirect flood flows? As previously discussed, the project would require the preparation and approval of a post-construction water quality management plan that ensures the project meets post-construction specifications of the General Construction Permit, including for the project to replicate the pre-project water balance for the smallest storms up to and including the 85th percentile, 24-hour precipitation event or the smallest precipitation event that generates runoff, whichever is larger, and ensure that post-project runoff time of concentration is equal to or greater than pre-project time of concentration. As such, the proposed project would be designed to not significantly alter the overall topography of the project area, disturbing existing drainage patterns and potentially increasing runoff in the site. Proposed stormwater infrastructure onsite would be designed in compliance with Fresno County Improvement Standards and grading requirements of the County's Code of Ordinances by a California licensed Civil Engineer or Architect. Therefore, the project would not impede or redirect flood flows onsite, and impacts would be less than significant.

Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- Result in a substantial erosion or siltation on- or off-site;
- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
- Impede or redirect flood flows.

Level of Significance Without Mitigation: Less Than Significant

d. Would the project release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zones?

Flood Hazards. The proposed project is not within a 100, 200 or 500-Year Floodplain Area as mapped by FEMA.[20,21] Therefore, the proposed project would not be subject to flood hazards.

Seiche Zones. The project site is not in the vicinity of a body of water substantial enough to experience seiches. Furthermore, the project site is not in the vicinity of an active fault zone and has a relatively low probability of experiencing strong shaking, so the potential for seiches is low.

Tsunamis. The project site is located approximately 74 miles inland from the Pacific Ocean. Therefore, the chances of a tsunami impacting the project site are negligible.

Furthermore, as discussed in Section 4.9, Hazards and Hazardous Materials, buildout under the proposed project would be consistent with federal, State and local regulations pertaining to the transport, use, or disposal of hazardous materials. Therefore, the risk of releasing pollutants from the project site due to inundation caused by floods, tsunamis or seiches would be less than significant.

Impact HYD-4: In flood hazard, tsunami, or seiche zones, the project would not risk release of pollutants due to project inundation.

Level of Significance Without Mitigation: Less Than Significant

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

[20] California Department of Water Resources (DWR). Best Available Map. Website: https://gis.bam.water.ca.gov/bam/ (accessed June 28, 2022).

[21] Federal Emergency Management Agency (FEMA). 2020. FEMA Flood Map Service Center: Search By Address. Website: https://msc.fema.gov/portal/search?AddressQuery#searchresultsanchor (accessed April 8, 2022).

The Central Valley RWQCB establishes water quality goals for surface water and groundwater within the San Joaquin Basin, including the Westside Subbasin, in the Basin Plan. As described in Section a above, in compliance with the General Construction Permit and Chapter 14.24 of the Fresno County Code of Ordinances, the proposed project would implement BMPs during project construction to manage erosion and potential pollutant transfers that could affect groundwater and surface water quality. The process wastewater discharge associated with the proposed project would be subject to approval of project WDR by the RWQCB. Through preparation and implementation of a Wastewater and Nutrient Management Plan to support project WDR, wastewater discharge rates would be calculated to ensure that they do not surpass the nutrient loading capacity of the soils in the approximately 3,700-acre irrigation discharge area, resulting in impacts to groundwater quality. Additionally, stormwater infrastructure for the project site, which would include inlets, catch basins, underground stormwater pipelines and an infiltration basin, would designed to meet Fresno County and the General Construction Permit's post-construction design requirements, which would ensure implementation of Stormwater Quality Management BMPs for stormwater runoff generated onsite. As such, stormwater and process wastewater from the project site would not affect local surface or groundwater quality, and would not result in conflicts with groundwater quality goals established in the Basin Plan. Therefore, the proposed project would not conflict with or obstruct a water quality control plan.

The project is located within the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The Westside Subbasin has been identified by the DWR as a critically overdrafted subbasin. Water for both the proposed project's processes and for fire suppression would be supplied by an existing deep irrigation well located on the northwest quadrant of the site. Based on estimated annual water demand for the project during Phase I, as well as results of the Well Completion Report prepared for the existing onsite well, the project would have sufficient supplies to meet project demand during Phase I. By Phase IV, it is estimated that the project would require a total annual water supply of 311.4 million gallons or 955.5 acre-feet to serve the project site. The existing groundwater well onsite is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two additional 500,000-gallon storage tanks for operational water retention. Groundwater extraction for project operation would be subject to the groundwater allocations for the County established in the GSP for the Westside Subbasin. The GSP sets sustainability goals consistent with sustainable groundwater management criteria designed to help the Subbasin achieve groundwater sustainability within 20 years of the GSP adoption. All jurisdictions located within the Subbasin, including Fresno County, must comply with the GSP's sustainability goals for groundwater, which includes groundwater allocations that equally distribute the total annual pumping from the Subbasin on the basis of land acreage overlying the Subbasin. As previously discussed, by Phase IV, project groundwater demand (955.5 AFY) would surpass permitted allocation for the project parcel (189.72 AFY); however, the Project Applicant would coordinate the approval of a Groundwater Credit Program for the project with the Westland Water District GSA, which allows augmented groundwater allocations to land owners that implement GSP-approved groundwater replenishment strategies, such as the proposed surface application of wastewater to irrigate the Project Applicant's surrounding orchards.

As such, the proposed project would not conflict with the Westside Subbasin GSP, the Basin Plan, or conflict with or obstruct any other water quality control or groundwater management plan, and impacts would be less than significant.

Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Level of Significance Without Mitigation: Less Than Significant

4.10.3.3 Cumulative Impacts

The geographic scope for considering project-related cumulative impacts on hydrology and water quality is the Westlands hydrologic region for surface water and the Westside Subbasin for groundwater.

The project-level analysis in this section determined impacts related to hydrology and water quality were less than significant with compliance with applicable non-point source pollution programs and the implementation of BMPs to address erosion and the discharge of pollutants in stormwater runoff as a result of construction activities.

Development of the proposed project in combination with future agricultural and/or development projects in the region would increase the amount of impervious surfaces in the area. Stormwater runoff is typically directed into adjacent streets where it flows to the nearest drainage system. In the case of the proposed project, the project would be required to design and develop an onsite stormwater collection and drainage system that meets post-construction specifications of the General Construction Permit, as well as Fresno County's requirements and design specifications for grading and drainage systems in unincorporated Fresno County, ensuring proposed stormwater infrastructure would have sufficient capacity to handle runoff from the site. Therefore, cumulative impacts associated with stormwater runoff and water quality would be less than significant.

The proposed project would extract approximately 311.4 million gallons of groundwater annually from onsite wells for operational use after buildout of Phase IV. As described in the Well Completion Report prepared for the project, the existing well onsite would provide sufficient supply to serve the project site during Phase I. Additionally, with minor improvements to the existing well's water pump and construction of two additional 500,000-gallon storage tanks in the project site, the existing well onsite would have sufficient water supplies to serve the project during Phase IV. As such, there would be sufficient supplies to meet projected water demand for the project.

Although, the project would require the extraction of 311.4 million gallons of groundwater annually, approximately 311.4 million gallons of process wastewater would be annually reused for irrigation purposes on approximately 3,700 irrigable acres of pistachio orchard surrounding the project site. The surface application of irrigation process wastewater would comply with WDRs from the RWQCB, and as such, the project would have no significant project-level and cumulative impacts related to groundwater recharge or water quality in the Westside Subbasin. Therefore, the proposed project would result in less than significant cumulative impacts to hydrology and water quality.

Impact HYD-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to hydrology.

Level of Significance Without Mitigation: Less Than Significant

4.11 LAND USE PLANNING

This section describes the existing land use character of the project site and evaluates the potential land use and policy consistency impacts of future development that could occur by adopting and implementing the proposed project.

4.11.1 Environmental Setting

4.11.1.1 Project Area

The project site is approximately 98 acres in size and is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is used for agricultural operations and is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site. Pilibos Ranch is located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project site and is publicly accessible by a driveway from West Panoche Road, southwest of the project site. Other agriculture-supporting buildings are located in the vicinity of the project site.

The project site is located within the Exclusive Agricultural District (AE-20). This district is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related uses of the land that could be detrimental to the physical and economic well-being of the community. Uses permitted within the AE-20 District include the harvesting, curing, processing, packaging, shipping and selling of agricultural products, among other activities, subject to applicable limitations stated in Section 816 of the County of Fresno (County) zoning ordinance. The project site is located within Assessor's Parcel Number (APN) 019-150-64S, which is currently under a Williamson Act contract. The proposed project would be required to complete the procedure of no-renewal of the Williamson Act contract at APN 019-150-64S.

4.11.2 Regulatory Setting

4.11.2.1 Federal Regulations

Federal Aviation Regulation Title 14 Part 77. The Federal Aviation Administration regulates airspace around public use airports. The three existing airports located within the Planning Area are required to be consistent with Part 77 of the Federal Aviation Regulations (FAR). Part 77 requires the airspace to be free of obstructions to air navigation during critical flight phases and states that obstructions shall not penetrate the "imaginary surfaces" surrounding an airfield as defined in FAR Part 77. The "imaginary surfaces" are determined by runway length and type of navigational approach instrumentation available.

4.11.2.2 State Regulations

The Cortese-Knox-Hertzberg Local Government Reorganization Act. The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56300 et seq.) governs the establishment and revision of local government boundaries. The Act was a comprehensive revision of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 1985. The Act is a policy of the State to encourage orderly growth and development that is essential to the social, fiscal, and

economic well-being of the State. The intent of the Act is to promote orderly development while balancing competing State interests of discouraging urban sprawl, preserving open space and prime agricultural lands, and efficiently extending government services.

California Land Conservation Act. The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the act, landowners agreeing to keep their lands under agricultural production for a minimum of 10 years receive property tax adjustments. Williamson Contracts limit the use of the properties to agricultural, open space, and other compatible use. Williamson Act lands are assessed based on their agricultural value, rather than their potential market value under nonagricultural uses.

4.11.2.3 Local Regulations

County of Fresno Zoning Ordinance. The County's zoning ordinance establishes zoning districts and regulations applicable to each district to establish orderly development in Fresno County. The zoning ordinance classifies the project site within the County's Exclusive Agricultural District (AE-20). This district is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related land uses that could be detrimental to the physical and economic well-being of the community.

County of Fresno General Plan. The General Plan contains the following policies aimed at reducing potential land use conflicts, promoting an efficient urban form and economic development of value-added commodities, and ensuring consistency with local land use and environmental plans. General Plan policies applicable to the proposed project are included in Table 4.11.A.

4.11.3 Impacts and Mitigation Measures

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

4.11.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on land use and planning if it would:

a. Physically divide an established community; or

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.11.A: Fresno County General Plan Policies Related to Land Use and Planning

Policy/Action Item No.	Policy
Land Use Element	
Policy LU-A.1	The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.
Policy LU-A.3	The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses listed in Table LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria: a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics; b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity; c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (1/4) mile radius; d. A probable workforce should be located nearby or be readily available; e. For proposed agricultural commercial center uses the following additional criteria shall apply: 1. Commercial uses should be clustered in centers instead of single uses. 2. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four (4) miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community. 3. New commercial uses should be located within or adjacent to existing centers. 4. Sites should be located on a major road serving the surrounding area. 5. Commercial centers should not encompass more than one-quarter (1/4) mile of road frontage, or one-eighth (1/8) mile if both sides of the road are involved, and should not provide potential for developments exceeding ten (10) separate business activities, exclusive of caretakers' residences; f. For proposed value-added agricultural processing facilities, the evaluation under criteria "a" above, shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services; and g. For proposed churches and schools, the evaluation under criteria LU-A.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community. When approving a discretionary permit for an existing commercial use, the criteria listed above shall apply except for LU-A.3b, e2, e4, and e5.
Policy LU-A.13	The County shall minimize potential land use conflicts between agricultural activities and urban land uses through the provision of appropriate buffers or other measures.
Economic Development Element	
Policy ED-A.20	The County shall support accelerated development of high-value-added food processing firms.

Source: General Plan (County of Fresno 2000).

4.11.3.2 Project Impacts

The following discussion describes the potential impacts related to land use and planning that could result from implementation of the proposed project.

a. Would the project physically divide an established community?

The proposed project would have a significant environmental impact if it would create a barrier between portions of an established community. The physical division of an established community typically refers to the construction of a physical feature (e.g., an Interstate highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas.

The proposed project would construct a pistachio hulling, processing, and packing facility on the project site, which is currently open farm ground and is not developed. The project site is surrounded by agricultural uses to the north, south, east, and west, and by West Panoche Road to the south and east. Therefore, implementation of the proposed project would not result in a physical division of an established community or adversely affect the continuity of land uses in the project vicinity. As such, the project would not physically divide an established community, and impacts would be less than significant.

Impact LU-1: The project would not physically divide an established community.

Level of Significance Without Mitigation: Less Than Significant

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

County of Fresno Zoning Ordinance. The County's zoning ordinance establishes zoning districts and regulations applicable to each district to establish orderly development in Fresno County. The zoning ordinance classifies the project site within the County's Exclusive Agricultural District (AE-20). This district is intended to protect the welfare of the agricultural community of Fresno County from encroachment of non-related land uses that could be detrimental to the physical and economic well-being of the community. Uses permitted in the district include the harvesting, curing, processing, packaging, shipping, and selling of agricultural products, among other activities, that are subject to approval of a Conditional Use Permit and applicable limitations stated in Chapter 2, Section 816 of the County of Fresno zoning ordinance.[1] The proposed project includes the application for Conditional Use Permit No. 3709 for the operation of the proposed pistachio processing facility. Compliance with the conditions of approval outlined in the Conditional Use Permit would ensure that the proposed project is compliant with the project site's Exclusive Agricultural District zoning. Therefore, the proposed project would not conflict with the County's zoning ordinance and the impact would be less than significant.

[1] County of Fresno. 2018. Zoning Ordinance. Website: https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/zoning-ordinance (accessed April 8, 2022).

County of Fresno General Plan. The General Plan includes policies for the conservation of agricultural land use designations in Fresno County. Table 4.11.A includes the General Plan policies applicable to the proposed project. The proposed project would implement Policy LU-A.1, which requires the maintenance of agriculturally-designated areas for agriculture use. The proposed project would be an agricultural facility, consistent with the project site's zoning, and it would not introduce urban developments into an agriculturally-designated area. The proposed project would introduce a pistachio processing facility to the project site, which pursuant to Policy LU-A.3, qualifies as an agriculturally-related and value-added agricultural use that qualifies for a discretionary permit from the County. As such, pursuant to this policy, the project would include submittal and approval of a Conditional Use Permit application pursuant to the requirements of Section 816 of the Fresno County zoning ordinance for the construction and operation of the proposed pistachio processing facility on the project site. The proposed project would be developed in an agricultural area of Fresno County to process agricultural products grown in the county and would not require the implementation of buffers to prevent land use conflicts, pursuant to Policy LU-A.13. Finally, the proposed project would also be consistent with Policy ED-A.20 and Economic Development goals of the General Plan because it would construct a value-added agricultural food processing facility. Therefore, the proposed project would not conflict with land use policies from the General Plan, and the impact would be less than significant.

California Land Conservation Act. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The proposed project would introduce a pistachio hulling, processing, and packing agricultural facility into the project site, and Fresno County has determined that the non-renewal of the Williamson Act contract at APN 019-150-64S for the 98-acre area occupied by the proposed facility would be required.

As described in Section 4.2.3.2 (b) of Section 4.2, Agriculture and Forestry Resources, implementation of Mitigation Measure AG-2 would ensure that the Project Applicant complies with the required procedure for non-renewal of the Williamson Act contract at APN 019-150-64S for the 98-acre area occupied by the proposed project prior to the issuance of building permits for the project. As such, by the time project development begins at the project site, contract non-renewal would be in process and within 10 years there would be no parcels within the project site under a Williamson Act contract. Therefore, the proposed project would not conflict with an existing Williamson Act contract, and the impact would be less than significant.

> **Impact LU-2:** The project would not cause 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.
>
> **Level of Significance Without Mitigation:** Less Than Significant

4.11.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to land use and planning in Fresno County.

As discussed above under Section 4.11.3.2(a), the proposed project would not physically divide an established community. The proposed project is not expected to contribute to any cumulative division of any established communities.

As discussed in Section 4.11.3.2(b), the proposed project would be consistent with applicable land use plans, policies, and regulations and would not result in cumulative land use conflicts in Fresno County. Therefore, the proposed project would result in a less than significant cumulative impact related to land use planning.

Impact LU-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to land use and planning.

Level of Significance Without Mitigation: Less Than Significant

4.12 NOISE

This section describes existing noise and vibration conditions, sets forth criteria for determining the significance of noise and vibration impacts and estimates the likely noise and vibration impacts that would result from construction and operation of the proposed project. Mitigation measures are identified, as necessary, to address significant environmental impacts.

4.12.1 Environmental Setting

The setting section begins with an introduction to several key concepts and terms that are used in evaluating noise. This section also includes a description of current noise sources that affect the project site and the noise conditions that are experienced in the project site vicinity.

4.12.1.1 Characteristics of Sound

Noise is usually defined as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally related to annoyance, while loudness can affect our ability to hear through hearing damage. Pitch is the number of complete vibrations, or cycles per second, of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. Sound pressure refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be measured precisely with instruments. The project analysis defines the noise environment of the planning area in terms of sound pressure levels and the project's effect on sensitive land uses.

4.12.1.2 Measurement of Sound

Sound intensity is measured with the A-weighted decibel scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound, similar to the human ear's de-emphasis of these frequencies. Decibels, unlike linear units (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) is 10 times more intense than 1 dB, 20 dB is 100 times more intense than 1 dB, and 30 dB is 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels generate from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from

the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations) the sound decreases 3 dB for each doubling of distance in a hard site environment. Similarly, line sources with intervening absorptive vegetation or line sources that are located at a great distance to the receptor would decrease 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noise occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation and sleeping hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Table 4.12.A contains a list of typical acoustical terms and definitions. and Table 4.12.B shows common sound levels and their sources.

Table 4.12.A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris, Cyril 1998).

Table 4.12.B: Common Sound Levels and Their Noise Sources

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 ft		
	— 100 —	
Gas lawn mower at 3 ft		
	— 90 —	
Diesel truck at 50 ft at 50 mph		Food blender at 3 ft
	— 80 —	Garbage disposal at 3 ft
Noisy urban area, daytime		
Gas lawn mower, 100 ft	— 70 —	Vacuum cleaner at 10 ft
Commercial area		Normal speech at 3 ft
Heavy traffic at 300 ft	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	

Source: *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans 2013).
Caltrans = California Department of Transportation
dBA = A-weighted decibels
ft = feet
mph = miles per hour

4.12.1.3 Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas.

4.12.1.4 Fundamentals of Vibration

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.[1] When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, the construction of the project could result in ground-borne vibration that may be perceptible.

Ground-borne vibration has the potential to damage buildings. Although it is very rare for typical construction activities to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings. Ground-borne vibration that may resulting in damage is usually measured in terms of peak particle velocity (PPV).

[1] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual – FTA Report No. 0123*. September.

4.12.1.5 Overview of the Existing Noise Environment

Traffic Noise. The primary existing noise sources in the project area are transportation facilities, including Annedale, Newcomb Avenue, and West Panoche Road. In order to assess the existing noise conditions in the area, four short-term noise measurements were conducted at the project site on July 27, 2023. The locations of the noise measurements are shown on Figure 3 of the Noise and Vibration Memorandum[2] prepared for the project, included as Appendix I of this Environmental Impact Report (EIR), and the results are summarized in Table 4.12.C.

Table 4.12.C: Existing Noise Level Measurements

Location Number	Location Description	Time	Average Noise Level (L_{eq})
ST-1	Northeast corner of project site by power pole, approximately 45 ft from Newcomb Avenue centerline.	5:49 PM – 5:59 PM	36.1
ST-2	Near northern boundary of project site, approximately 1,300 ft from Newcomb Avenue centerline.	6:05 PM – 6:16 PM	33.9
ST-3	Center of project site, approximately 1,300 ft from Newcomb Avenue centerline and 1,260 ft away from ST-2.	6:19 PM – 6:29 PM	34.9
ST-4	Near western boundary of project site, by pump and palm tree, approximately 850 ft away from Annedale centerline.	6:47 PM – 6:57 PM	40.6

Source: Compiled by LSA (October 2023).
ft = foot/feet
L_{eq} = equivalent continuous sound level

Aircraft Noise. The project site is approximately 12.3 miles south of Firebaugh Airport. Because the project site is not located within the 65 dBA CNEL and 60 dBA CNEL noise contours, no further analysis associated with aircraft noise impacts is necessary. Additionally, there are no helipads or private airstrips within 2 miles of the project area.

Sensitive Land Uses in the Project Vicinity. Certain land uses are considered more sensitive to noise than others are. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is mainly surrounded by active farmland. Land uses adjacent to the project site include the following:

- **Northeast:** Existing residential and agriculture-supporting uses
- **Southeast:** Existing Pilibos Ranch

The nearest sensitive receptors are:

- The existing residential uses within the existing Pilibos Ranch, approximately 480 feet from the project site boundary.

The remaining parcels surrounding the project site are primarily in agricultural use and generating typical noise profiles of agriculture-related activities.

[2] LSA Associates, Inc. 2023. Noise and Vibration Impact Analysis: S. Stamoules, Inc. Pistachio Processing Project in the County of Fresno, California. October 5.

4.12.2 Regulatory Setting

4.12.2.1 Federal Regulations

United States Environmental Protection Agency (EPA). In 1972, Congress enacted the United States Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels). For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to 70 dBA during a 24-hour period of time. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, with no community reaction. However, 1 percent of the population may complain about noise at this level, and 17 percent may indicate annoyance. The EPA cautions that these identified levels are guidelines, not standards.[3]

Federal Transit Administration (FTA). Construction noise criteria included in the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual)[4] was used in this analysis for construction noise assessment. The criteria presented in Table 4.12.D shows the FTA's Detailed Assessment Construction Noise Criteria based on the composite noise levels per construction phase.

Table 4.12.D: Detailed Assessment Daytime Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)
Residential	80
Commercial	85
Industrial	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

Additionally, the guidelines within the FTA Manual were used to determine vibration impacts. Table 4.12.E lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual.

The FTA Manual guidelines show that a vibration level of up to 0.2 inches per second (in/sec) in PPV is considered safe for non-engineered timber and masonry buildings, which are the types of buildings located on properties adjacent to the project site. Accordingly, the 0.2 in/sec PPV threshold was used to evaluate vibration impacts at the nearest structures to the project site.

[3] United States Environmental Protection Agency (EPA). 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March.

[4] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual – FTA Report No. 0123.* September.

Table 4.12.E: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
in/sec = inches per second
PPV = peak particle velocity

4.12.2.2 State Regulations

The State of California's Green Building Standards Code (CALGreen Code) contains mandatory measures for nonresidential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when nonresidential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, or other noise source. If the development falls within an airport or freeway 65 dBA CNEL noise contour, buildings shall be constructed to provide an interior noise level environment attributable to exterior sources that does not exceed an hourly equivalent level of 50 dBA L_{eq} in occupied areas during any hour of operation.

4.12.2.3 Local Regulations

Fresno County Ordinance Code. Chapter 8.40 of the County of Fresno (County) Ordinance Code (Noise Ordinance) establishes noise standards for a variety of land uses in Fresno County and noise source exemptions. Section 8.40.040 exterior noise standards, as shown in Table 4.12.F, were used to assess project maximum acceptable noise levels. Section 8.40.060 exempts the following activities from the provisions of the County's municipal code:

a. Activities conducted in public parks, public playgrounds, and public or private school grounds, including but not limited to school athletic and school entertainment events

b. Any mechanical device, apparatus or equipment used, related to or connected with emergency activities or emergency work

c. Noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 5:00 p.m. on Saturday or Sunday

d. Noise sources associated with the maintenance of residential property provided such activities take place between the hours of 6:00 a.m. and 9:00 p.m. on any day except Saturday or Sunday, or between the hours of 7:00 a.m. and 9:00 p.m. on Saturday or Sunday

e. Noise sources associated with agricultural activities on agricultural property

Table 4.12.F: Exterior Noise Level Standards

Category	Cumulative Number of Minutes in Any 1-Hour Period	Noise Level Standards, dBA	
		Daytime (7:00 a.m.–10:00 p.m.)	Nighttime (10:00 p.m.–7:00 a.m.)
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Source: Ordinance Code (County of Fresno 2023).
dBA = A-weighted decibels

f. Noise sources associated with a lawful commercial or industrial activity caused by mechanical devices or equipment, including air conditioning or refrigeration systems, installed prior to the effective date of this chapter;

g. Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities

h. Noise sources associate with the drilling or redrilling of petroleum, gas, injection or water wells

i. Noise sources associated with the collection of waste or garbage from property devoted to commercial or industrial uses

j. Any activity to the extent regulation thereof has been preempted by state or federal law

County of Fresno General Plan. The Health and Safety Element provides goals and policies that work to protect residential and other noise-sensitive uses from exposure to harmful or annoying noise levels, to identify maximum acceptable noise levels compatible with various land use designations, and to develop a policy framework necessary to achieve and maintain a healthful noise environment. Table 4.12.G includes General Plan noise policies applicable to the proposed project.

4.12.3 Impacts and Mitigation Measures

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

Table 4.12.G: Fresno County General Plan Policies Related to Noise

Policy/Action Item No.	Policy
Health and Safety Element	
Policy HS-G.1	The County shall require that all proposed development incorporate design elements necessary to minimize adverse noise impacts on surrounding land uses.
Policy HS-G.5	Where noise mitigation measures are required to achieve acceptable levels according to land use compatibility or the Noise Control Ordinance, the County shall place emphasis of such measures upon site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, earthen berms, and building construction practices. The County shall consider the use of noise barriers, such as soundwalls, as a means of achieving the noise standards after other design-related noise mitigation measures have been evaluated or integrated into the project.
Policy HS-G.6	The County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance.
Policy HS-G.7	Where existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects, the County shall apply the following criteria to determine the significance of the impact: a. Where existing noise levels are less than 60 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in noise levels will be considered significant; b. Where existing noise levels are between 60 and 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in noise levels will be considered significant; and c. Where existing noise levels are greater than 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 1.5 dB L_{dn} increase in noise levels will be considered significant.
Policy HS-G.8	The County shall evaluate the compatibility of Proposed Projects with existing and future noise levels through a comparison to Chart HS-1, "Land Use Compatibility for Community Noise Environments."

Source: General Plan (County of Fresno 2000).

4.12.3.1 Significance Criteria

The thresholds for impacts related to noise used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. Development of the proposed project would result in a significant impact related to noise if it would:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b. Generate excessive ground-borne vibration or ground-borne noise levels; or

c. For a project located within the vicinity of a private airstrip an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

4.12.3.2 Project Impacts

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

a. Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies, including, as appropriate, the County.

The County addresses noise in the Health and Safety Element of the General Plan and in the Code of Ordinances. The Health and Safety Element provides goals and policies that work to protect residential and other noise-sensitive uses from exposure to harmful or annoying noise levels, to identify maximum acceptable noise levels compatible with various land use designations, and to develop a policy framework necessary to achieve and maintain a healthful noise environment. Applicable Health and Safety Element policies are outlined on Table 4.12.G.

In addition, the County addresses construction noise in Section 8.40, Noise Control, of the Code of Ordinances. Section 8.40.040 sets exterior noise standards, as shown in Table 4.12.F.

Section 8.40.060 states that construction activities are exempt from noise standards provided that construction activities take place between 6:00 a.m. and 9:00 p.m. Monday through Friday and between 7:00 a.m. and 9:00 p.m. on Saturday and Sunday.

Certain land uses are considered more sensitive to noise than others. Examples of these sensitive land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The nearest sensitive land uses to the project include existing residential uses within Pilibos Ranch, approximately 480 feet from the project site boundary.

Short-Term (Construction) Noise Impacts. Two types of short-term noise would occur during project construction, including: (1) equipment delivery and construction worker commutes, and (2) project construction operations.

The first type of short-term construction noise would result from the transport of construction equipment and materials to the project site and construction worker commutes. These transportation activities would incrementally raise noise levels on access roads leading to the site. It is expected that larger trucks used in equipment delivery would generate higher noise impacts than trucks associated with worker commutes. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (e.g., passing trucks at 50 feet would generate up to 84 dBA L_{max}), the effect on longer-term ambient noise levels would be small when compared to existing daily traffic volumes on West Panoche Road. The results of the California Emissions Estimator Model (CalEEMod) for the proposed project indicate that during the grading phase, an additional 159 vehicles, consisting of worker and hauling trips, would be added to the roadway adjacent to the project site. Because the existing traffic volume on West Panoche Road is more than 159 vehicles, construction-related vehicle trips would not approach existing daily traffic volumes, and traffic noise would not increase by 3 dBA CNEL. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term

construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during site preparation, grading, building construction, architectural coating, and paving on the project site. Construction is undertaken in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the project site. Therefore, the noise levels would vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.12.H lists the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 feet between the construction equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1 to 2 minutes of full-power operation followed by 3 to 4 minutes at lower power settings. Additionally, Table 4.12.I shows the project construction phases, the expected duration of each phase, the equipment expected to be used during each phase, the composite noise levels of the construction equipment at 50 feet, the distance of the nearest sensitive receptor from the average location of construction activities (i.e., a distance of 2,000 feet from the center of the project site), and noise levels expected during each phase of construction.

Table 4.12.H: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 ft
Compressor	100	81
Concrete Mixer	40	85
Concrete Pump	40	85
Crane	16	83
Dozer	40	80
Forklift	20	75
Front [End] Loader	40	79
Generator	100	78
Grader	8	85
Scraper	40	88
Welder	40	74

Source 1*: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* (EPA 1971).
Source 2: Roadway Construction Noise Model (FHWA 2006).
ft = feet
L_{max} = maximum instantaneous sound level

Table 4.12.I: Construction Noise Levels by Phase

Phase	Duration (days)	Equipment	Composite Noise Level at 50 ft (dBA L_{eq})	Distance to Sensitive Receptor (ft)[1]	Noise Level at Receptor (dBA L_{eq})
Site Preparation	50	3 dozers and 4 tractors	88	2,000	56
Grading	70	1 grader, 2 scrapers, 1 dozer, 3 tractors, and 1 excavator	89	2,000	57
Building Construction	740	1 crane, 3 forklifts, 1 generator set, 3 tractors, and 1 welder	86	2,000	54
Paving	50	2 pavers, 2 paving equipment, and 2 rollers	86	2,000	54
Architectural Coating	50	1 air compressor	74	2,000	42

Source: Compiled by LSA (2023).
[1] Distances are from the average location of construction activity for each phase, assumed to be the center of the project site. Residential uses to the north are 30 feet from the edge of construction activity.
dBA L_{eq} = average A-weighted hourly noise level
ft = feet

As presented in Table 4.12.I, it is expected that average noise levels during construction at the nearest sensitive receptor, the residential uses to the southeast, would approach 57 dBA L_{eq} during the grading phase, which would occur for a duration of approximately 70 days. Average noise levels during other construction phases would range from 42 dBA L_{eq} to 56 dBA L_{eq}. Noise levels at the nearest off-site commercial uses to the northeast would reach an average noise level of 55 dBA L_{eq} during the daytime hours. These predicted noise levels would only occur when all construction equipment is operating simultaneously; therefore, these noise levels are assumed to be conservative in nature.

Although the project construction-related, short-term noise levels have the potential to be higher than the ambient noise in the project vicinity, construction noise would cease to occur once the project construction is completed. Furthermore, the construction-related noise levels would be below the 80 dBA L_{eq} and 85 dBA L_{eq} criteria established by FTA for residential and commercial uses, respectively. The project would be constructed in compliance with the requirements of the County's Noise Ordinance, which states that construction activities shall only occur between the hours of 6:00 a.m. and 9:00 p.m. on weekdays and between 7:00 a.m. and 5:00 p.m. on Saturdays and Sundays. With incorporation of Best Management Practices (BMPs) for noise reduction, the overall noise levels generated will be minimized, and construction noise impacts would be less than significant. No mitigation is required.

Long-Term Noise Impacts.

Long-Term Off-Site Traffic Noise Impacts. The guidelines included in the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77 108) were used to evaluate highway traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to

determine the CNEL values. Table 4.12.J provides the traffic noise levels for the opening year with and without project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

Table 4.12.J: Traffic Noise Levels Without and With Proposed Project – Cumulative

Roadway	Roadway Segment	Direction	Cumulative – Without Project		Cumulative – With Project		
			ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Existing Conditions (dBA)
West Panoche Road	North of Project Driveway	Northbound	1,100	54.8	1,270	55.4	0.6
		Southbound	240	48.2	380	50.2	2.0
	South of Project Driveway	Northbound	1,100	54.8	1,190	55.1	0.3
		Southbound	240	48.2	350	49.8	1.6

Source: Compiled by LSA (October 2023).
ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
ft = feet

The without and with project scenario traffic volumes were obtained from the Traffic Impact Study[5] (Appendix J). Attachment D of the Noise and Vibration Memorandum (Appendix I) provides the specific assumptions used in developing these noise levels and model printouts. Table 4.12.J shows that the increase in project-related traffic noise would be no greater than 2.0 dBA. Noise level increases less than 3.0 dBA are not perceptible to the human ear. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and no mitigation measures are required.

Operational Noise Impacts. Adjacent off-site land uses would be potentially exposed to stationary-source noise impacts from the proposed operations activities. The harvest season is 45 days long, during which time the machinery associated with the proposed pistachio processing facility would be running at least 18 hours a day for a total of 810 hours. The proposed process building would consist of a steel-framed structure designed with 8-inch thick Insulated Metal Panels (IMP) for exterior walls and 6-inch interior walls. The IMP walls are Thermal-Loc Mode SL-100 insulated panels with 1.25# expanded polystyrene core. The sound transmission coefficient (STC) is estimated to be between 26 and 30.

To determine the future noise impacts from project operations to the noise sensitive uses, a 3-D noise model (i.e., SoundPLAN) was used to incorporate the site topography as well as the shielding from the proposed processing building. Any equipment located within the processing building or within an enclosure is not expected to contribute to overall noise levels. The model incorporates the following stationary sources, which are located outdoors:

[5] LSA Associates, Inc. 2023. *Traffic Impact Study for S. Stamoules, Inc. Pistachio Processing Facility Project, Fresno County, California*. August.

- Three (3) Forsburgs Gravity Decks, assumed to operate 24 hours per day, could generate sound power levels (SPLs) of up to 99.9 dBA SPL based on data provided in the SoundPLAN emission library for a 50-horsepower (HP) electric motor.

- Ten (10) Sukup Dryers and ten (10) future Sukup Dryers, assumed to operate 24 hours per day, could generate up to 99.9 dBA SPL based on data provided in the SoundPLAN emission library for a 50 HP electric motor.

- Five (5) delivery trucks would arrive on site for loading and unloading activities. During this process, noise levels are associated with the truck engine noise, air brakes, and back-up alarms. These noise levels would occur for a shorter period of time (less than 5 minutes), which generate a noise level of 76.3 dBA L_8 at 20 feet based on measurements taken by LSA.[6]

Based on the SoundPLAN results presented in Attachment E of the Noise and Vibration Memo (Appendix I), noise levels generated at the closest sensitive uses to the southeast will not exceed the County's daytime and nighttime noise standards of 50 dBA L_{eq} and 45 dBA L_{eq}. Therefore, the impact would be less than significant, and no noise reduction measures are required.

Impact NOI-1: The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Level of Significance Without Mitigation: Less Than Significant

b. Would the project generate excessive groundborne vibration or groundborne noise levels?

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hangings on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less, which is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, ground-borne vibration from standard construction practices is only a potential issue when it occurs within 25 feet of sensitive uses. Ground-borne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic

[6] LSA Associates, Inc. 2016. *Operational Noise Impact Analysis for Richmond Wholesale Meat Distribution Center*. May.

significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The nearest potentially sensitive receptor to the project are residential uses within Pilibos Ranch, which is located approximately 480 feet southeast of the project site boundary.

Construction Vibration Impacts. Ground-borne noise and vibration from construction activity would be low. Table 4.12.K provides reference PPV values and vibration levels (in terms of vibration velocity decibels [VdB]) from typical construction vibration sources at 25 feet. While there is currently limited information regarding vibration source levels specific to the equipment that would be used for the project, to provide a comparison of vibration levels expected for a project of this size, a large bulldozer would generate 0.089 PPV (inches per second [in/sec]) of ground-borne vibration when measured at 25 feet based on the FTA Manual. As shown previously in Table 4.12.E, it would take a minimum of 0.2 PPV (in/sec) to cause any potential building damage to non-engineered timber and masonry buildings.

Table 4.12.K: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS VdB re 1 µin/sec.
µin/sec = microinches per second
ft = feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project construction boundary (assuming the construction equipment would only be used at or near the project setback line). The formula for vibration transmission is provided below:

$$PPV_{equip} = PPV_{ref} \times (\frac{25}{D})^{1.5}$$

The closest structures to the external construction activities are the residential uses to the southeast, which are within approximately 480 feet from the project's southeastern construction boundary. Using the reference data from Table 4.12.K and the equation above, vibration levels are expected to approach 0.001 PPV (in/sec) at the nearest surrounding structures and would not exceed the 0.2 PPV (in/sec) damage threshold considered safe for non-engineered timber and

masonry buildings. Vibration levels at all other buildings would be lower. Therefore, project construction would not result in any vibration damage, and impacts would be less than significant.

Long-Term Vibration Impacts from Vehicular Traffic. The proposed project would not generate vibration levels related to on-site operations. In addition, vibration levels generated from project-related traffic on the adjacent roadways would be unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Based on a reference vibration level of 0.076 PPV (in/sec), structures more than 20 feet from the roadways that contain project trips would experience vibration levels below the most conservative standard of 0.12 PPV (in/sec); therefore, vibration levels generated from project-related traffic on the adjacent roadways would be less than significant, and no mitigation measures are required.

Impact NOI-2: The project would not generate excessive ground-borne vibration or ground-borne noise levels.

Level of Significance Without Mitigation: Less Than Significant

c. For a project located within the vicinity of a private airstrip an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As required by the California Department of Transportation (Caltrans) Division of Aeronautics, the Fresno County Airport Land Use Commission (ALUC) must prepare an Airport Land Use Compatibility Plan (ALUCP) for public and public use airports within its jurisdiction. An ALUCP guides local jurisdictions in determining appropriate compatible land uses with detailed findings and policies. The ALUCP includes CNEL noise contours based on projected airport and aircraft operations. The purpose of these noise contours is to minimize the effect of airport and aircraft noise on the adjacent community by determining land use compatibility and locations for noise mitigation measures during the planning, design, and development process.

The Fresno County ALUCP establishes land uses that are either acceptable or unacceptable within each CNEL noise contour based on the noise sensitivity of the particular use. Noise-sensitive land uses are typically only acceptable in areas outside the 65 dB CNEL and greater noise contours. It is within these areas that the Fresno County ALUC has determined that sensitive land uses can occur while still minimizing the effects of adjacent and overhead aircraft noise on noise-sensitive receptors. Any land use decision made within the jurisdictional boundary of the ALUCP, and based upon policies set forth by the approved General Plan, must be consistent with the ALUCP, including the land use compatibility policies based on CNEL noise contours, as required by law.

The proposed project is not located within 2 miles of a private or public use airport or helipad. The project site is approximately 12.3 miles south of Firebaugh Airport. The nearest medical center helipad is Community Regional Medical Center, which is located approximately 45 miles northeast from the project site in the City of Fresno. No portion of the project site lies within the 65 dBA CNEL noise contours of any ALUCP nor does any portion of the project site fall within 2 miles of any airport or helipad. Therefore, the proposed project would not result in the exposure of sensitive

receptors to excessive noise levels from aircraft noise sources, and the impact would be less than significant.

Impact NOI-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 2 miles of a public airport or public use airport, the proposed project would not expose people residing or working in the project area to excessive noise levels.

Level of Significance Without Mitigation: Less Than Significant

4.12.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to noise.

Short-Term Construction Impacts. Buildout of the proposed project would introduce construction activities to the project site 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.

The closest sensitive receptor to the proposed project includes residential uses within Pilibos Ranch, approximately 480 feet southeast of the project site boundary. Maximum construction noise levels would occur during the grading phase, at 89 dBA L_{eq} at 50 feet. It is expected that average noise levels during construction at the nearest sensitive receptor would approach 57 dBA L_{eq} during the grading phase, which would occur for a duration of approximately 70 days. Noise levels at the nearest off-site commercial uses to the northeast would reach an average noise level of 55 dBA L_{eq} during the daytime hours. Average noise levels during other construction phases would range from 42 dBA L_{eq} to 56 dBA L_{eq}.

As discussed above, although the project construction-related short-term noise levels have the potential to be higher than the ambient noise in the project vicinity, construction noise would cease to occur once the project construction is completed. Furthermore, the construction-related noise levels would be below the 80 dBA L_{eq} and 85 dBA L_{eq} criteria established by the FTA for residential and commercial uses. As such, the project would result in a less than significant impact related to construction noise levels.

Additionally, the project would be constructed in compliance with the requirements of the County's Noise Ordinance, which states that construction activities shall only occur between the hours of 6:00 a.m. and 9:00 p.m. on weekdays and between 7:00 a.m. and 5:00 p.m. on Saturdays and Sundays.

Therefore, 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.

Long-Term Operational Impacts.A characteristic of sound is that a doubling of a noise source is required to result in a perceptible (3 dBA or greater) increase in the resulting noise level. The increase in project-related traffic noise would be no greater than 2.0 dBA, and as such, the proposed

project would not result in a doubling of daily trips on local roadways in the project site vicinity. Therefore, it is not expected that project daily trips would result in a perceptible noise increase along any roadway segment in the project vicinity and would not result in a perceptible increase in traffic noise levels at receptors in the project vicinity. Therefore, the proposed project contributions to cumulative traffic noise would result in a less than significant cumulative impact.

Stationary noise generated by the proposed project includes noise from machinery included in the processing building, which would run for a total of 810 hours during the pistachio harvest season. To determine the future noise impacts from project operations to the noise sensitive uses, a 3-D noise model (i.e., SoundPLAN) was used to incorporate the site topography as well as the shielding from the proposed processing building. Based on the SoundPLAN results, noise levels generated at the closest sensitive uses to the southeast of the project site boundary will not exceed the County's daytime and nighttime noise standards of 50 dBA L_{eq} and 45 dBA L_{eq}, respectively. Therefore, the proposed project would not expose persons to stationary source noise levels in excess of County noise standards and would not result in a significant cumulative impact.

Short-Term Construction and Long-Term Traffic Vibration Impacts. Buildout of the proposed project would use construction equipment such as bulldozers, trucks, and jackhammers on site that could produce ground-borne vibrations. The nearest receptor to the project site are residential uses within Pilibos Ranch, located approximately 480 feet southeast of the project site boundary. Vibration levels at the nearest receptors during construction are expected to approach 0.001 PPV (in/sec), and would not exceed the 0.2 PPV (in/sec) damage threshold considered safe for non-engineered timber and masonry buildings. Vibration levels at all other farther receptors would be lower. Additionally, structures more than 20 feet from the roadways that contain project trips would experience vibration levels below the most conservative standard of 0.12 PPV (in/sec); therefore, vibration levels generated from project-related traffic on the adjacent roadways would be less than significant. Therefore, the proposed project would not result in a significant cumulative impact related to ground-borne vibration.

Airport Impacts. The proposed project is not located within 2 miles of a public use airport or helipad, and no portion of the project site lies within the 65 dBA CNEL noise contours of any ALUCP. Therefore, implementation the proposed project would not result in impacts from adjacent and overhead aircraft noise on noise-sensitive land uses, and impacts associated with noise produced by public, public use, or private airports and the proposed project would not result in a significant cumulative impact.

> **Impact NOI-4:** The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to noise.
>
> **Level of Significance Without Mitigation:** Less Than Significant

4.13 TRANSPORTATION

This section describes the existing transportation network of the proposed site and evaluates the potential impacts associated with the proposed project, both at the individual and cumulative levels. The analysis in this section is based in part on the Transportation and Circulation Element of the County of Fresno (County) General Plan, and on the Traffic Impact Study (TIS)[1] prepared by LSA included in Appendix J of this Environmental Impact Report (EIR).

4.13.1 Environmental Setting

4.13.1.1 Roadway Network

The project study area includes the following major roadways as classified based on the roadway classification provided in the Circulation Element of the County's General Plan:

- **West Panoche Road:** Within the study area, West Panoche Road is designated as a Collector in the County's General Plan. West Panoche Road is mostly a two-lane, undivided roadway within the study area. There are no bike facilities or provision for designated on-street parking along either direction of this segment.

4.13.1.2 Bicycle Facilities

According to the Fresno County Regional Bicycle & Recreational Trails Master Plan, the bikeway network within Fresno County is classified in three categories:

- **Class I:** Class I bikeways are paths/trails that follow existing streams and greenways and are a component of a community trails system separate from motor vehicle traffic.

- **Class II:** Class II bikeways are paths that provide designated lanes for the use of bicycles through the use of striping on the roadway and signage designations for the facility.

- **Class III:** Class III bikeways are paths that are designated only by signage and are generally shared between bicyclists and motorists.

Currently, within the project study area, there is no existing or planned bicycles facilities.

4.13.1.3 Pedestrian Facilities

Under existing conditions, the project site has extremely limited pedestrian access, as there are no sidewalks in the vicinity.

4.13.1.4 Transit Facilities

Fresno County Rural Transit Agency (FCRTA) is the Transportation Service Agency within Fresno County and is responsible for coordinating transit services within its service area. FCRTA allows passengers to travel conveniently, by providing both inner-city service to residents of communities

[1] LSA Associates, Inc. 2023. Traffic Impact Study, S. Stamoules, Inc. Pistachio Processing Facility Project, Fresno County, California. August.

within its service area, as well as intercity services from outlying communities. As well as reservation-based, FCRTA provides demand responsive service that offers curb-to-curb transportation. There are currently no transit routes present within the study area.

4.13.2 Regulatory Setting

4.13.2.1 Federal Regulations

Federal Highway Administration (FHWA). The FHWA is a major agency of the United States Department of Transportation (USDOT). In partnership with State and local agencies, the FHWA carries out federal highway programs to meet the nation's transportation needs. The FHWA administers and oversees federal highway programs to ensure that federal funds are used efficiently.

Americans with Disabilities Act of 1990 (ADA). Titles I, II, III, IV, and V of the ADA have been codified in Title 42 of the United States Code (USC), beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and nonprofit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Standards for Accessible Design, which establish minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Federal Transit Administration (FTA). The FTA is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by USC Title 49, which states the FTA's interest in fostering the development and revitalization of public transportation systems. The FTA invests approximately $12 billion annually to support and expand public transit.

4.13.2.2 State Regulations

Assembly Bill 32 (Global Warming Act of 2006) and Senate Bill 375. Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, requires California to reduce its greenhouse gas (GHG) emissions to levels presented in the year 1990 by 2020. In response, the California Air Resources Board (CARB) is responsible for creating guidelines for this Act. In 2008, the CARB adopted its proposed Scoping Plan, which included the approval of Senate Bill (SB) 375 as a means of achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks helps the State comply with AB 32.

Established through the CARB, SB 375 lists four major components and requirements: (1) regional GHG emissions targets; (2) a Sustainable Communities Strategy (SCS) that provides a plan for meeting the regional targets; (3) regional housing elements and transportation plans that are synchronized on 8-year schedules; and (4) transportation and air pollutant emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

Assembly Bill 1358 (Complete Streets). The California Complete Streets Act requires general plans updated after January 30, 2011, to include Complete Streets policies so that roadways are designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, the elderly, and persons with disabilities, as well as motorists. The goal of this Act is to encourage cities to

rethink policies that emphasize automobile circulation, prioritize motor vehicle improvements, and come up with creative solutions that emphasize all modes of transportation. Complete Streets roadways allow for more transportation options, more non-single-occupancy vehicles, and less traffic congestion. Additionally, increased transit ridership, walking, and biking can reduce air pollution while improving the overall travel experience for road users.

While there is no standard for a Complete Streets design, it generally includes one or more of the following features: bicycle lanes, wide shoulders, well-designed and well-placed crosswalks, crossing islands in appropriate mid-block locations, bus pullouts or special bus lanes, audible and accessible pedestrian signals, sidewalk bulb-outs, center medians, street trees, planter strips, and groundcover.

Senate Bill 743. On September 27, 2013, Governor Jerry Brown signed SB 743 into law and codified a process that changed transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. SB 743 directs the California Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions that removes automobile vehicle delay and level of service (LOS) or other similar measures of vehicular capacity or traffic congestions from CEQA transportation analysis. SB 743 requires the analysis of vehicle miles traveled (VMT) or other measures that "promote the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses," to be used as a basis for determining significant impacts to circulation in California. The goal of SB 743 is to appropriately balance the needs of congestion management with statewide goals related to reducing GHG emissions, encourage infill development, and promote public health through active transportation.

Guide for the Preparation of Traffic Impact Studies. The California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies[2] provides general guidance regarding the preparation of traffic impact studies for projects that may have an impact on the State highway system. The guidance includes when a traffic study should be prepared and the methodology to use when evaluating operating conditions on the State highway system.

The Guide for the Preparation of Traffic Impact Studies states, "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS." In accordance with this recommendation, consultation with Caltrans staff indicated that Caltrans would be willing to consider LOS D at the LOS D/E threshold when improvements become infeasible for State facilities. The Guide for the Preparation of Traffic Impact Studies also states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing [measure of effectiveness (MOE)] should be maintained."

[2] California Department of Transportation (Caltrans). 2002. Guide for the Preparation of Traffic Impact Studies. December.

4.13.2.3 Local Regulations

Fresno County Council of Governments (Fresno COG). The Fresno COG is a voluntary association of local governments and a regional planning agency comprising of 16 member jurisdictions, including the City of Fresno (City). The members are represented by a Policy Board consisting of mayors of each incorporated city, and the Chairman of the County Board of Supervisors, or their designated elected official. The Policy Advisory Committee (PAC), composed of the Chief Administrative Officer of each member agency, assists the Board in its decision-making process. Others involved in the decision process include expert staff from member agencies, citizen and interest groups, and other stakeholders. The Fresno COG's purpose is to establish a consensus on the needs of the Fresno County area and further action plans for issues related to the Fresno County region. The current regional transportation plan, known as the Fresno County Regional Transportation Plan (RTP) (2042), was adopted in 2018. The RTP addresses GHG emissions reductions and other air emissions related to transportation, with the goal of preparing for future growth in a sustainable way. The plan specifies how funding will be sourced and financed for the region's planned transportation investments, ongoing operations, and maintenance. The goals, objectives, and policies of the RTP are established to direct the courses of action that will provide efficient, integrated multi-modal transportation systems to serve the mobility needs of people, including accessible pedestrian and bicycle facilities, and freight, while fostering economic prosperity and development, and minimizing mobile sources of air pollution. They are organized into six broad transportation mode-based categories: (1) general transportation; (2) highways, streets, and roads; (3) mass transportation; (4) aviation; (5) active transportation; and (6) rail.

County of Fresno General Plan. The Transportation and Circulation Element of the County of Fresno 2000 General Plan provides the framework for Fresno County decisions concerning the countywide transportation system. It also establishes standards that guide the development of the transportation system and management of access to the highway system by new development throughout the unincorporated areas of Fresno County. Table 4.13.A lists General Plan policies applicable to the proposed project.

4.13.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to transportation and traffic that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Cumulative impacts are also addressed.

4.13.3.1 Significance Criteria

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

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;

b. Conflict or be inconsistent with *State CEQA Guidelines* Section 15064.3, subdivision (b);

Table 4.13.A: Fresno County General Plan Policies Related to Transportation

Policy/Action Item No.	Policy/Action Item
Transportation and Circulation Element	
Policy TR-A.3	The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section. Exceptions to the access standards may be permitted in the manner and form prescribed in the Fresno County Zoning and Subdivision Ordinances, provided that the designed safety and operational characteristics of the existing and planned roadway facility will not be substantially diminished.
Policy TR-A.5	The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development, and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.
Policy TR-A.7	The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system.
Policy TR-A.8	The County shall ensure that land development that affects roadway use or operation or requires roadway access, plan, dedicate, and construct required improvements consistent with the criteria in the Circulation Diagram and Standards section

Source: General Plan (County of Fresno 2000).

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d. Result in inadequate emergency access.

4.13.3.2 Project Impacts

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

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed project would result in the construction of a pistachio processing facility that would include hulling and processing buildings, drive-over pits, dryer areas, and storage silos to process pistachio crops from the surrounding orchards. The proposed project would be implemented in four phases over a period of approximately 8 years, and each phase would include the construction and addition of buildings, working areas, and equipment to increase the capacity of the project site. The majority of project trips are expected to occur during peak harvest season from September to October. During the off-season, project trips from year-round office staff are expected to be minimal.

While LOS analysis is no longer a criterion of significance for traffic impacts under CEQA, the Fresno County General Plan includes policies that utilize LOS to determine project conditions of approval. As such, this analysis includes LOS impacts while VMT impacts are discussed in Section b below.

Per the Draft Guidelines for the Preparation of Traffic Impact Studies within the County of Fresno (TIS Guidelines)[3], dated May 2018, the County of Fresno has an LOS standard of D on urban roadways within the spheres of influence of the Cities of Fresno and Clovis. The LOS standard on all other roadways in the County is LOS C. None of the study intersections and roadway segments are located within the spheres of influence of the Cities of Fresno and Clovis. Therefore, for the study area, LOS C has been considered the applicable LOS standard. The following operational deficiency criteria is applicable for study intersections and roadway segments in Fresno County.

The County considers that operational deficiencies at both signalized and unsignalized intersections occur when the project causes an unsatisfactory condition (e.g., deterioration from LOS A through D to LOS E or F on urban areas, or deterioration from LOS A through C to LOS D, E or F on County areas) or when the project causes the average delay to increase by more than 5.0 seconds at an intersection that is operating at an unacceptable LOS.

The County considers operational deficiencies at roadway segments to occur when the project causes an unsatisfactory condition (e.g., deterioration from LOS A through D to LOS E or F on urban roadways or deterioration from LOS A through C to LOS D, E or F on County roadways) or when the project causes the volume-to-capacity (v/c) ratio (on a directional peak-hour basis) to increase by more than 0.05 on a roadway that is already operating at an unacceptable LOS.

The TIS[4] examined traffic operations in the vicinity of the proposed project under the following six scenarios:

- Existing conditions
- Existing Plus Project conditions
- Near-Term Without Project conditions
- Near-Term Plus Project conditions
- Cumulative Without Project conditions
- Cumulative Plus Project conditions

Traffic conditions were examined for the weekday a.m. and p.m. peak-hour conditions. The a.m. peak hour is defined in the TIS Guidelines as the one hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m. However, based on the observed traffic counts along the project frontage, the a.m. peak hour occurs between 4:30 a.m. and 5:30 a.m., while the p.m. peak hour is between 1:30 p.m. and 2:30 p.m. Therefore, as a conservative estimate, for both a.m. and p.m. peak hours, these peak hour counts were utilized as a conservative approach.

Based on the County's TIS Guidelines, any intersection where the project is projected to add 10 or more peak-hour trips, and any roadway segment where the project is adding 100 or more daily trips should be included in the TIS. As per information provided by the Project Applicant, during peak

[3] County of Fresno. 2018. *Guidelines for the Preparation of Traffic Impact Studies Within the County of Fresno*. Department of Public Works and Planning. Draft. May.

[4] LSA Associates, Inc. 2023. Traffic Impact Study, S. Stamoules, Inc. Pistachio Processing Facility Project, Fresno County, California. August.

harvest season, there will not be any trucks carrying processed pistachio products to retail and wholesale markets. Therefore, apart from employees and services vehicles, which include a total of less than 10 peak-hour trips, the remaining project traffic will be for pistachio raw material hauling and dry waste hauling trucks. These trucks will be stored at a cold storage facility on 904 South Lyons Avenue and will be carrying the pistachios from the orchards in the vicinity of the project site. However, there are no major intersections between the project site and the cold storage site. Study intersections and roadway segments considered for the analysis were finalized during the TIS scoping agreement process and based on the discussion with County staff.

Intersections. The following are the study intersections analyzed in the TIS:

1. West Panoche Road/Project Driveway (Fresno County).

Roadway Segments. The following are the study roadway segments analyzed in the TIS:

1. North of Project Driveway (Fresno County); and
2. South of Project Driveway (Fresno County).

Project Trip Generation. To assess potential impacts that the project may have on the surrounding roadway network, the first step was to determine project trip generation. Project trip generation was developed based on the project's operational statement and estimated future annual production under full buildout conditions. Project trip generation associated with raw material hauling, dry waste hauling, employee vehicle trips, and service vehicle trips was determined. Table 4.13.B shows project trip generation. Overall, the project is anticipated to generate 51 Passenger Car Equivalent (PCE) trips during both the a.m. and p.m. peak hours and 653 daily PCE trips during the peak harvest season.

Level of Service Analysis. Traffic volumes for existing conditions were developed using recent count data collected by Counts Unlimited at the project vicinity. Daily traffic counts were collected along West Panoche Road along the project frontage in May 2023. Traffic volumes for cumulative year conditions were developed using Fresno COG's Activity Based Model (ABM). The methodology used to develop cumulative year traffic volumes at all study intersections is consistent with the National Cooperative Highway Research Program (NCHRP) and Fresno COG's procedures for post-processing modeled traffic volumes. Traffic volumes for the near-term scenario were developed using linear interpolation method between Existing traffic volume and Cumulative Year traffic volumes developed using forecast traffic data from the Fresno COG ABM and after using the NCHRP and Fresno COG postprocessing methodology.

For the Existing Without Project scenario, since the West Panoche Road/Project Driveway intersection is a future intersection, currently there is no conflicting movements present at this location. As such, no LOS analysis was conducted for this intersection under this scenario. Roadway segment LOS analysis conducted for existing conditions identified that all roadway segments are currently operating at a satisfactory LOS under existing conditions.

Table 4.13.B: Project Trip Generation

Land Use	AM Peak Hour			PM Peak Hour			Daily Trips
	In	Out	Total	In	Out	Total	
Raw Material Hauling Trucks							
Trip Generation[1]	6	6	12	6	6	12	190
PCE Generation[2]	18	18	36	18	18	36	570
Dry Waste Hauling Trucks							
Trip Generation[3]	1	1	2	1	1	2	12
PCE Generation[2]	3	3	6	3	3	6	36
Employees							
Trips/Unit[4]	0.44	0.09	0.53	0.11	0.38	0.49	3.10
Trip Generation	6	1	7	2	5	7	43
Service Vehicles[5]	2	0	2	0	2	2	4
Total Trip Generation	**15**	**8**	**23**	**9**	**14**	**23**	**249**
Total PCE Trip Generation	**29**	**22**	**51**	**23**	**28**	**51**	**653**

Source: Table 5-C, Traffic Impact Study (LSA 2023).

[1] As per information provided by the applicant, under full build-out conditions, the facility will process approximately 131,733,333 pounds of harvested material from the applicant's 13,000 acres of orchard. The capacity of each truck is 25 tons or 50,000 pounds. Considering 28 days of peak harvesting season, and the facility operating all seven days a week during the peak harvesting season, the average number of inbound trucks per workday required to haul material to the site is approximately 95. Additionally, the trucks are anticipated to arrive and leave the site uniformly over a 17-hour period.

[2] As a conservative approach, all truck trips were converted to PCEs using a PCE factor of 3.0.

[3] The facility is estimated to produce 8,562,667 pounds of dry waste material for the 131,733,333 pounds of harvested material. Considering 28 days of peak harvesting season, and the facility operating all seven days a week during the peak harvesting season, the average number of inbound trucks per workday required to haul material to the site is approximately 12. As a conservative approach, it was assumed that one inbound and one outbound dry waste truck trip during both the a.m. peak hour and p.m. peak hour.

[4] Rates obtained from the Institute of Transportation Engineers Trip Generation Manual (11th Edition) for Land Use 110 - "General Light Industrial", Setting/Location - General Urban/Suburban. The facility will have a maximum of 14 employees.

[5] As per information provided by the applicant, only two light duty service trucks will visit the site every day. As a conservative approach, both service vehicles have been assumed to arrive during the a.m. peak hour and leave during the p.m. peak hour.

PCE = Passenger Car Equivalent

For the Existing Plus Project scenario, all project intersections and roadway segments are forecast to operate at a satisfactory LOS.

For the Near-Term Without Project scenario, since the West Panoche Road/Project Driveway intersection is a future intersection, no conflicting movements are anticipated to be present at the study intersection. As such, no LOS analysis was conducted for this location under this scenario. Additionally, all project roadway segments are forecast to operate at a satisfactory LOS under near-term without project conditions.

For the Near-Term Plus Project scenario, all project intersections and roadway segments are forecast to operate at a satisfactory LOS.

For the Cumulative Without Project scenario, since the West Panoche Road/Project Driveway intersection is a future intersection, no conflicting movements are anticipated to be present at the study intersection. As such, no LOS analysis was conducted for this location under this scenario. Additionally, all project roadway segments are forecast to operate at a satisfactory LOS under cumulative without project conditions.

For the Cumulative Plus Project scenario, all project intersections and roadway segments are forecast to operate at a satisfactory LOS.

Because all project intersections and roadway segments are forecast to operate at a satisfactory LOS under all "plus project" scenarios, no roadway or intersection improvements are required. Potential LOS impacts on study intersections and roadway segments would be less than significant.

Transit. There are no existing dedicated transit facilities within the project site. The proposed project is not located in an important transit corridor in Fresno County, so it is not anticipated that the construction of additional transit facilities would be required in the study area as a result of the proposed project. Therefore, the proposed project would not substantially conflict with plans or policies supporting public transit or transit facilities, and a less than significant impact would occur.

Bicycles. There are no existing or planned bicycle facilities in the project vicinity. The proposed project would not conflict with the planning and construction of bicycle facilities pursuant to the County's Regional Bicycle & Recreational Trails Master Plan or other plans or policies supporting bicycles or bicycle facilities in Fresno County. Therefore, a less than significant impact would occur.

Pedestrian Facilities. There are no existing dedicated pedestrian facilities within the project site. The proposed project would not include the construction of pedestrian facilities in the project site or in the project vicinity. As such, the proposed project would not conflict with plans and policies for pedestrian facilities in Fresno, and a less than significant impact would occur.

Conclusion. As described above, the addition of project traffic is not anticipated to exceed the County's level of significance threshold of LOS. In addition, the project-related traffic would not result in a deficiency to existing transit, roadway, bicycle, and pedestrian facilities. Therefore, the proposed project would not conflict with any plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or congestion management program. Impacts would be less than significant.

> **Impact TRA-1:** The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
>
> **Level of Significance Without Mitigation:** Less Than Significant Impact

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

SB 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as VMT instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

The *State CEQA Guidelines* were amended to implement SB 743 by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact.

Therefore, LOS measures of impacts on traffic facilities is no longer a relevant CEQA criterion for transportation impacts.

Fresno County is one of the member jurisdictions of the Fresno COG. The Fresno COG has recently completed the Fresno County SB 743 Implementation Regional Guidelines, dated January 2021 (VMT Guidelines)[5] that includes recommended screening criteria, methodology, and significant threshold criteria for projects within Fresno COG member jurisdictions, including Fresno County. Substantial evidence is also included in the implementation guidelines for these screening criteria, recommended methodologies, and significant impact criteria. Therefore, the VMT evaluation was conducted using the recommended screening criteria, methodology, and significant threshold criteria included in the Fresno COG VMT Guidelines.

The Fresno COG VMT Guidelines provides multiple screening criteria for land use projects. Each of these criteria was evaluated for the project to determine if the project can be screened out. The following is a brief description of the applicability of each of these screening criteria for the proposed project:

- **Transit Priority Area (TPA) Screening:** The project is not located within a TPA. Therefore, this screening criteria does not apply to the project.

- **Low Trip Generator:** The Fresno COG VMT Guidelines identify that a project generating less than 500 daily trips could be screened out provided there is substantial evidence to support the claim. As discussed in Section 4.13.3.8 (a), the project is estimated to generate 249 daily trips. Therefore, the project would satisfy this screening criteria.

- **Low VMT Zone Screening:** The Fresno COG VMT Guidelines state that residential and office projects located in a low VMT area could be screened out from a detailed VMT analysis. The project land use could not be classified as residential or office land uses. Therefore, the project does not satisfy this screening criteria. However, the project location was evaluated in the Fresno COG VMT screening tool under non-residential uses, and it is not located within a low VMT zone either.

- **Other Screening Criteria:** The project is neither an affordable housing project nor can it be classified as local-serving retail, institutional/government uses, or public service uses. Therefore, these screening criteria do not apply to the project.

As stated above, the project would be screened out from a detailed VMT analysis as a low trip generator. As such, pursuant to the Fresno COG VMT Guidelines, a detailed VMT analysis is not required for the project. Project VMT impacts would be less than significant.

Impact TRA-2: The proposed project would not conflict or be inconsistent with *State CEQA Guidelines* Section 15064.3, subdivision (b).

Level of Significance Without Mitigation: Less Than Significant Impact

[5] Fresno County Association of Governments (Fresno COG). 2021. *Fresno County SB 743 Implementation Regional Guidelines*. January.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project would consist of the construction of a pistachio processing facility that would include hulling and processing buildings, drive-over pits, dryer areas, and storage silos. The proposed project would also construct an access driveway that would connect the project site to West Panoche Road. Implementation of the proposed project would increase the amount of vehicle traffic circulation along study roadways and intersections. However, project traffic under "with project" scenarios would not result in unsatisfactory LOS at study roadways and intersections. As such, no improvements are recommended for project roadways and intersections.

Site Access and Circulation Analysis. A sight distance analysis was conducted at the Project Driveway along West Panoche Road to evaluate safe access in and out of the project site. Sight distance is the length of the visible roadway that a driver can see approaching vehicles before their line of sight is blocked by any object. For purposes of this analysis, both the stopping sight distance and corner sight distance have been evaluated.

According to the Caltrans *Highway Design Manual*[6] (HDM), the stopping sight distance is the minimum sight distance along a roadway required to allow a driver to decrease their speed from the design speed to a complete stop. The corner sight distance is the minimum sight distance in which a driver at a stop-controlled approach can see oncoming traffic on the major street to safely maneuver onto the roadway.

The stopping sight distance was evaluated on the major arterial abutting the project (i.e., West Panoche Road). The posted speed limit on West Panoche Road is 50 miles per hour (mph). The posted speed limit is considered as the design speed for the purposes of the study. The minimum stopping sight distance is 430 feet for a design speed of 50 mph. Therefore, the minimum stopping sight distance has been considered as 430 feet for the project driveway.

As for corner sight distance, Section 405.1 of the HDM states that corner sight distance requirements are not applicable for urban driveways unless signalized. However, as a conservative approach, corner sight distances were also evaluated for the project driveways. The minimum corner sight distance was based on design speed, time gap, and type of vehicles from the minor road (Project Driveway 1) to enter the major road (West Panoche Road). Based on the requirements established in the HDM for combination trucks, it was determined that a minimum corner sight distance of 850 feet would be required for left-turn maneuvers coming out of the project driveway. Furthermore, a minimum corner sight distance of 775 feet would be required for right-turn maneuvers coming out of the project driveway. Corner sight triangles prepared for the project driveway indicate that the project driveway would provide adequate sight distance for left- and right-turn maneuvers onto West Panoche Road.

[6] California Department of Transportation (Caltrans). 2020. Highway Design Manual – Seventh Edition. July 1. Website: https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm (accessed July 2023).

Queuing. An intersection queuing analysis was prepared for the project. The County's TIS Guidelines require an analysis to examine the need for left-turn pockets at the project site entrance to address safe and acceptable traffic operations. The queues for the project have been reported from SimTraffic since Synchro does not appropriately report queues at unsignalized intersections. The available turn-pocket storage lengths and 95th percentile back-of-queue lengths at the project driveway under existing, near-term, and cumulative year without project and plus project conditions were determined. Based on results of the queuing analysis, the proposed project is not anticipated to block the through traffic at the project driveway.

Therefore, the proposed project would not increase hazards due to design features or incompatible uses, and a less than significant impact would occur.

> **Impact TRA-3:** The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
>
> **Level of Significance Without Mitigation:** Less Than Significant

d. Would the project result in inadequate emergency access?

Vehicular access to the project site would be provided by an access driveway that would connect the project site to West Panoche Road. The proposed driveway would meet County requirements for encroachment easement and vehicle ingress and egress easement permits. Therefore, the alteration of the existing roadway would not block or conflict with the access of emergency services to the project vicinity or block evacuation routes for the project site and vicinity. The impact would be less than significant.

> **Impact TRA-4:** The project would not result in inadequate emergency access.
>
> **Level of Significance Without Mitigation:** Less Than Significant

4.13.3.3 Cumulative Impacts

A proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to transportation. The cumulative impact analysis for transportation considers the larger context of future development of Fresno County as envisioned by the General Plan and relied upon the projections of the General Plan and General Plan EIR. Cumulative impacts on transportation would be those impacts that result from continued buildout of the General Plan.

The proposed project would be consistent with applicable regulations, including the County's General Plan policies and County's Regional Bicycle & Recreational Trails Master Plan, as well as other plans or policies supporting existing and planned pedestrian, bicycle, and transit facilities in Fresno County. The proposed project would not construct new pedestrian, transit, and bicycle facilities or conflict with existing and planned facilities in Fresno County. Additionally, project-related traffic would not contribute to LOS deficiency in project roadways and intersections. All project intersections would continue meeting the County's LOS standards after implementation of

the project. As such, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system standards (including transit, roadway, bicycle, and pedestrian facilities), and would not contribute to cumulative impacts related to LOS deficiencies in the roadway system; a less than significant cumulative impact would occur.

The proposed project would provide adequate sight distance for safe left- and right-turn maneuvers onto West Panoche Road from the project driveway. Storage lengths and 95th percentile back-of-queue lengths at the project driveway under all scenarios evaluated in the TIS indicate that the proposed project is not anticipated to block the through traffic at the project driveway. Additionally, the project would introduce a pistachio processing and handling facility into an agriculture-zoned parcel that would be compatible with uses allowed under the County's Agricultural zoning district. As such, the project would not contribute to cumulative impacts related to hazardous geometric design features or incompatible uses.

The proposed project's plans would be subject to review and approval by the County to ensure that the project includes adequate emergency access, and the project would comply with County requirements for encroachment easement and vehicle ingress and egress easement permits for the project driveway. As such, the proposed project would not contribute to cumulative impacts related to inadequate emergency access.

Finally, the proposed project was evaluated following the Fresno COG VMT Guidelines screening criteria, and it was determined that the project would be screened out from a detailed VMT analysis as a low trip generator, generating less than 500 daily trips. As such, pursuant to the Fresno COG VMT Guidelines, a detailed VMT analysis is not required for the project. Project VMT impacts would be less than significant.

> **Impact TRA-5:** The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to transportation.
>
> **Level of Significance Without Mitigation:** Less Than Significant

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4.14 UTILITIES AND SERVICE SYSTEMS

This section addresses potential impacts to utilities and service systems such as water supply, wastewater, stormwater, and solid waste resulting from implementation of the proposed project. The analysis in this section is based on project information as described in Chapter 3.0, Project Description, of this Environmental Impact Report (EIR), the Technical Report for the Report of Waste Discharge[1] (Appendix G) and in the Well Completion Report[2] prepared for the existing well on the project site. (Appendix H).

4.14.1 Environmental Setting

The project site is approximately 98 acres in size and is located in western Fresno County, approximately 8 miles southwest of Mendota. The project site is used for agricultural operations and is bounded by farm fields and West Panoche Road to the south, West Panoche Road and farm fields to the east, and farm fields to the north and to the west. The San Luis Canal of the California Aqueduct is located approximately 0.6 mile to the west of the project site. Pilibos Ranch is located to the southeast of the project site, across West Panoche Road. The Cardella Winery is located to the northwest of the project site. Other agriculture-supporting buildings are located in the vicinity of the project site.

The project site is located within Fresno County's Exclusive Agricultural District (AE-20). The project site is located within Assessor's Parcel Number (APN) 019-150-64S, which is currently under a Williamson Act contract.

4.14.1.1 Water Supply

Water supply for the operation of the proposed pistachio processing facility and for fire suppression would be extracted from an existing well located on the northwest corner of the project site. A Well Completion Report[3] prepared for the existing on-site well in 2015 identified the well's yield capacity as approximately 1,800 gallons per minute (gpm). Water would be pumped from the existing well, conveyed via underground pipelines that would be designed to meet County of Fresno (County) requirements, through sand media filters, and stored in a 250,000-gallon storage tank. Approximately 180,000 gallons of water would be allotted for fire suppression and would be available at all times during project operation. Additionally, a new domestic well meeting all applicable development standards required by the County would be developed on the project site for potable water purposes.

Most of the water used at the project site would be used during the peak of the harvest season, which is between September and October. It is anticipated that Phase I of the proposed project would require between 1,000 gpm and 1,250 gpm of water for processing during the peak season, totaling 78.03 million gallons (239.5 acre-feet) annually. With completion of Phase IV, the proposed

1 Valley Science and Engineering. 2022. Technical Report for the Report of Waste Discharge, Pistachio Processing Facility. S. Stamoules, Inc., Mendota, CA. June.
2 California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.
3 Ibid.

project is expected to use between 4,000 gpm and 5,000 gpm of water during the peak season, which equates to approximately 311.4 million gallons (955.5 acre-feet) annually. The existing groundwater well on site is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two additional 500,000-gallon storage tanks for operational water retention.[4]

4.14.1.2 Wastewater

By buildout of Phase IV, the operation of the proposed pistachio processing facility would annually generate approximately 311.4 million gallons of process wastewater. The project proposes the collection, filtering, and reuse of process wastewater from operation of the pistachio processing facility for crop irrigation of the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards. The process wastewater used to clean pistachios would first be pumped through screen filters to remove organic debris, then would be directed towards settling ponds on site for the removal of additional impurities, and finally would be pumped via an existing water delivery system and distributed via drip irrigation towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards. The surface application of wastewater would be subject to the approval of project Waste Discharge Requirements (WDRs) issued by the Regional Water Quality Control Board (RWQCB). Additionally, sewage wastewater generated on site would be managed separately from process wastewater through installation of a septic system built pursuant to requirements of the Fresno County Department of Public Works and Planning (FCPWP).

4.14.1.3 Stormwater

The proposed project would result in new impervious areas associated with site improvements and therefore would require new stormwater drainage facilities. The proposed project would be designed to collect and direct stormwater and other runoff from the site towards an on-site infiltration basin. Proposed stormwater collection and drainage infrastructure on the site would include inlets, catch basins, underground stormwater pipelines, and an infiltration basin constructed on the eastern portion of the site. Although plans for the proposed infiltration basin have not yet been finalized, the proposed stormwater infrastructure for the project would be required to comply with post-construction stormwater performance standards required by the General Construction Permit, including runoff volume and stormwater pollution management requirements, which would be implemented through the preparation of a post-construction water quality management plan that would be reviewed and approved by the County. Furthermore, pursuant to County requirements for development projects, the Project Applicant would be required to prepare and submit a Grading and Drainage Plan to the County for review and approval. The proposed Grading and Drainage Plan would be prepared by a California-licensed Civil Engineer or Architect and would require project compliance with applicable improvement standards[5] for drainage systems in unincorporated Fresno County and with grading specifications outlined in Chapter 15.28, Grading and Excavation, of the County of Fresno Code of Ordinances.

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4 County of Fresno. September 13, 2023. Personal communication with Ejaz Ahmad, Planner.

5 County of Fresno. 1966. Improvement Standards for Fresno County. October. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/grading/fresnoco.imp.standards10-66.pdf (accessed October 2023).

4.14.1.4 Solid Waste

The project would be served by Mid Valley Disposal, a private disposal service that would collect and convey recycled and other inorganic waste generated from daily operations at the project site. The nearest Mid Valley Disposal facility is located approximately 25 miles northeast of the project site at 15300 West Jensen Avenue in Kerman, California. Dewatered hulling residue obtained from the pistachio processing facility and organic waste material obtained from process wastewater settling ponds would be conveyed off site for beneficial uses, mainly to be used as either cattle feed or as compost fertilizer for the Project Applicant's pistachio orchards.

4.14.1.5 Electric Power and Natural Gas

The Pacific Gas and Electric Company (PG&E) would provide electricity and natural gas services to the project site. The proposed project would connect to existing electric and natural gas infrastructure in the project vicinity, with service connections provided by PG&E. The Project Applicant would contract with PG&E to arrange connection to existing electricity and natural gas facilities for provision of services to the project site.

4.14.2 Regulatory Setting

4.14.2.1 Federal Regulations

Clean Water Act. The federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria. The County would be required to monitor water quality and conform to the regulatory requirements of the CWA.

Safe Drinking Water Act. The federal Safe Drinking Water Act (SDWA) is enforced by the United States Environmental Protection Agency (EPA) and sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The SDWA requires many actions to protect drinking water and its sources, including rivers, lakes, and groundwater.

National Pollutant Discharge Elimination System (NPDES) Permit. Section 402 of the CWA established the NPDES to control water pollution by regulating point sources that discharge pollutants into waters of the United States. In the State of California, the EPA has authorized the State Water Resources Control Board (SWRCB), as the permitting authority, to implement the NPDES program. The SWRCB issues two-baseline general permits: one for industrial operations and the other for construction activities (General Construction Permit). Additionally, the NPDES program includes the regulation of stormwater discharges from cities, counties, and other municipalities under Order No. R8-2009-0030 (WDRs for stormwater) and updated under Order No. 5-01-048 for the Central Valley Region.

Under the General Construction Permit, stormwater discharges from construction sites with a disturbed area of one or more acres are required to obtain either individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent (NOI) with the SWRCB. Each applicant under the Construction General Permit is required to both prepare an SWPPP prior to the commencement of grading activities and to ensure implementation of the

SWPPP during construction activities. The primary objective of the SWPPP is to identify, construct, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction activities. BMPs may include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. The SWPPP would also address BMPs developed specifically to reduce pollutants in stormwater discharges following the completion of construction activities.

The NPDES program also includes regulations for discharging limited threat wastewater to waters of the United States under Order No. R5-2022-0006. "Limited threat" wastewater refers to clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. Limited threat wastewater includes water from the following sources:

- Well Development Water
- Construction Dewatering
- Pump/Well Testing
- Pipeline/Tank Pressure Testing
- Pipeline/Tank Flushing or Dewatering
- Condensate
- Water Supply System
- Aggregate Mine
- Filter Backwash Water

4.14.2.2 State Regulations

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting WDRs. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits regulating discharges to waters of the United States. The project site is located within a portion of the State regulated by the Central Valley RWQCB.

Water Discharge Requirements. The Central Valley RWQCB typically requires a WDR permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the State other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the Central Valley RWQCB.

The NPDES serves as the WDR. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the Central Valley RWQCB in order to obtain a WDR. For specific situations, the Central Valley RWQCB may waive the requirement to obtain a WDR for discharges to

land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR.

Urban Water Management Planning Act. The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires publicly or privately owned water suppliers that provide more than 3,000 acre-feet of water annually or supply more than 3,000 customers to prepare a plan that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period in 5-year increments;
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands in normal, single-dry, and multiple-dry years; and
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 [SBX7-7]), which amends the Act and adds new water conservation provisions to the Water Code.

Senate Bill 610. Senate Bill (SB) 610 made changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources (DWR) publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that the Lead Agency for certain projects subject to the California Environmental Quality Act (CEQA) obtain a water supply assessment from a public water system as specified in the law.

Assembly Bill 3030, California Groundwater Management Act. The Groundwater Management Act of the California Water Code (Assembly Bill [AB] 3030) provides guidance for applicable local agencies to develop a voluntary Groundwater Management Plan in State-designated groundwater basins.

Senate Bill 1383, Short-Lived Climate Pollutants. In September 2016, Governor Edmund Brown Jr. set methane emissions reduction targets for California (SB 1383 Lara, Chapter 395, Statutes of 2016) in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP). The targets must:

- Reduce organic waste disposal 50 percent by 2020 and 75 percent by 2025.
- Recover at least 20 percent of currently disposed surplus food by 2025.

SB 1383 requires counties to take the lead collaborating with the jurisdictions located within those counties in planning for the necessary organic waste recycling and food recovery capacity needed to divert organic waste from landfills into recycling activities and food recovery organizations.

California Green Building Standards Code—Part 11, Title 24 (CALGreen Code). The CALGreen Code requires covered projects to recycle and/or salvage for reuse a minimum 65 percent of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance, whichever is more stringent.

Assembly Bill 939, California Integrated Waste Management Act. California's Integrated Waste Management Act of 1989 requires cities and counties to reduce the amount of waste disposed of in landfills. The Local Government Construction and Demolition (C&D) Guide of 2002 (SB 1374) amended this act to include construction and demolition material. The County created the County of Fresno's Construction and Demolition (C&D) Debris Recycling Program to fulfill requirements under these bills.

Beginning January 1, 2014, the County of Fresno required permit applicants to submit a Waste Management Plan for approval prior to issuance of permit for projects. The Waste Management Plan required as part of the County's C&D Debris Recycling Program is designed to assist County compliance with State mandates, and to provide builders with a means of documenting the waste reduction requirements included in the California Green Building Standards Code (CALGreen).

4.14.2.3 Local Regulations

Fresno County General Plan. The County's General Plan contains policies related to utilities and service systems. Table 4.14.A lists policies applicable to the proposed project.

4.14.3 Impacts and Mitigation Measures

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

4.14.3.1 Significance Criteria

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on utilities and service systems if it would:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental 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 inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

Table: 4.14.A: Fresno County General Plan Policies Related to Utilities and Service Systems

Policy/Action Item No.	Policy/Action Item
Land Use Element	
Policy LU-A.3	The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses listed in Table LU3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria: a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics; b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity; c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (1/4) mile radius; d. A probable workforce should be located nearby or be readily available; e. For proposed agricultural commercial center uses the following additional criteria shall apply: 1. Commercial uses should be clustered in centers instead of single uses. 2. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four (4) miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community. 3. New commercial uses should be located within or adjacent to existing centers. 4. Sites should be located on a major road serving the surrounding area. 5. Commercial centers should not encompass more than one-quarter (1/4) mile of road frontage, or one-eighth (1/8) mile if both sides of the road are involved, and should not provide potential for developments exceeding ten (10) separate business activities, exclusive of caretakers' residences; f. For proposed value-added agricultural processing facilities, the evaluation under criteria "a" above, shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services; and g. For proposed churches and schools, the evaluation under criteria LU-A.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community. h. When approving a discretionary permit for an existing commercial use, the criteria listed above shall apply except for LU-A.3b, e2, e4, and e5.

Table: 4.14.A: Fresno County General Plan Policies Related to Utilities and Service Systems

Policy/Action Item No.	Policy/Action Item
Open Space and Conservation Element	
Policy OS-A.23	The County shall protect groundwater resources from contamination and overdraft by pursuing the following efforts: a. Identifying and controlling sources of potential contamination; b. Protecting important groundwater recharge areas; c. Encouraging water conservation efforts and supporting the use of surface water for urban and agricultural uses wherever feasible; d. Encouraging the use of treated wastewater for groundwater recharge and other purposes (e.g., irrigation, landscaping, commercial, and nondomestic uses); e. Supporting consumptive use where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area; f. Considering areas where recharge potential is determined to be high for designation as open space; and g. Developing conjunctive use of surface and groundwater.
Policy OS-A.24	The County shall require new development near rivers, creeks, reservoirs, or substantial aquifer recharge areas to mitigate any potential impacts of release of pollutants in storm waters, flowing river, stream, creek, or reservoir waters.
Policy OS-A.26	The County shall continue to require the use of feasible and practical BMPs to protect streams from the adverse effects of construction activities and urban runoff.
Policy OS-A.27	The County shall monitor water quality regularly and take necessary measures to prevent contamination, including the prevention of hazardous materials from entering the wastewater system.
Policy OS-A.28	The County shall only approve new wastewater treatment facilities that will not result in degradation of surface water or groundwater. The County shall generally require treatment to tertiary or higher levels.
Public Facilities and Services Element	
Policy PF-E.11:	The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.
Policy PF-E.13:	The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural drainage features.
Policy PF-E.20	The County shall require new development of facilities near rivers, creeks, reservoirs, or substantial aquifer recharge areas to mitigate any potential impacts of release of pollutants in flood waters, flowing rivers, streams, creeks, or reservoir waters
Policy PF-E.21	The County shall require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities, and shall encourage the urban storm drainage systems and agricultural activities to use BMPs.
Policy PF-F.4:	The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.

Source: General Plan (County of Fresno 2000).

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. Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

4.14.3.2 Project Impacts

The following discussion describes the potential impacts related to utilities and service systems that could result from implementation of the proposed project.

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Supply. As discussed above in Section 4.14.1, Environmental Setting, water supply for the operation of the proposed pistachio processing facility and for fire suppression would be extracted from an existing well located on the northwest quadrant of the project site. It is estimated the project would require approximately 78.03 MG (239.5 AF) of water annually for project operations during Phase I. After buildout of Phase IV, the projected annual water use of the project site would be approximately 311.4 MG (239.5 AF).

A Well Completion Report[6] prepared for the existing onsite well in 2015 identified that the well's yield capacity is approximately 1,800 gallons per minute (gpm). Additionally, current readings for this well measured in August 2023 have identified water level at the well starting at a depth of approximately 378 feet.[7] As previously discussed, it is estimated that the project would require a total annual water supply of 78.03 MG or 239.5 AF to serve the project site during Phase I. Based on estimated water yields for the existing well onsite outlined in the Well Completion Report, the project would have sufficient capacity to meet projected water demands during Phase I. Additionally, a new domestic well would be developed on the project site for potable water purposes, which would further offset project water needs.

By Phase IV, it is estimated that the project would require a total annual water supply of 311.4 MG or 955.5 AF to serve the project site. Given that most of the water used at the project site would be used over a six-week period between September and October, during peak harvest season, the existing groundwater well with the 1,800-gpm pumping capacity is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two 500,000-gallon storage tanks for operational water retention.[8] Construction of storage tanks and pump modifications for the project site's existing water well would be minor changes to the water supply infrastructure onsite, and would not result

6 California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.
7 County of Fresno. September 13, 2023. Personal communication with Ejaz Ahmad, Planner.
8 Ibid.

in significant environmental effects with compliance of Fresno County's construction requirements and construction mitigation measures included in this EIR.

Wastewater. The project proposes the collection, filtering, and reuse of process wastewater from operation of the pistachio processing facility for crop irrigation of surrounding orchards. The proposed project would generate approximately 311.4 MG of process wastewater annually after buildout of Phase IV. The process wastewater from the pistachio processing facility would first be pumped through screen filters to remove organic debris, then would be directed towards settling ponds onsite for the removal of additional impurities, and finally would be pumped via an existing water delivery system and distributed via an existing drip irrigation towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards. As the distribution of process wastewater would occur through an existing distribution system, the project would not result in the construction of additional facilities for this purpose.

Furthermore, sewage wastewater generated onsite would be managed through the installation of a septic system. Consistent with requirements of the FCPWP, the final design of project septic systems would be based off results of site-specific percolation testing, ensuring that the soils at the site would be capable of supporting the use of the septic systems.[9] As such, the project would not include construction of new wastewater facilities, construction of which would result in significant environmental effects. Impacts would be less than significant.

Stormwater. The proposed project would result in new impervious areas associated with site improvements that would increase runoff from the project site, and would therefore require new stormwater drainage facilities. The proposed stormwater infrastructure for the project would include inlets, catch basins, underground stormwater pipelines and an infiltration basin to manage stormwater onsite. Although final design of stormwater infrastructure for the project has not been finalized, pursuant to requirements of the General Construction Permit, the Project Applicant would be required to prepare and submit a post-construction water quality management plan to the County for approval to comply with post-construction stormwater performance standards of the Construction General Permit, which require the project to replicate the pre-project water balance (volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event or the smallest precipitation event that generates runoff, whichever is larger, as well as implement BMPs to reduce pollutants in stormwater discharges that are reasonably foreseeable after all construction phases have been completed at the project site. Additionally, pursuant to requirements of the Fresno County project review process, the Project Applicant would be required to prepare a grading and drainage plan that outlines the design specifications of the proposed stormwater infrastructure onsite. The proposed grading and drainage plan would be prepared by a California licensed Civil Engineer or Architect, be compliant with Fresno County Improvement Standards for drainage systems in unincorporated Fresno County, and would comply with grading specifications outlined in Chapter 15.28 of the Fresno County Code of Ordinances, ensuring that the proposed stormwater infrastructure onsite would have sufficient capacity to handle surface runoff generated on the project site. As such, the project would not include the construction of new

[9] County of Fresno. 2017. Fresno County Local Area Management Program. Website: https://www.fresnocountyca.gov/files/sharedassets/county/vision-files/files/39300-fresno-county-lamp-2019.pdf (accessed October 2023).

stormwater facilities, construction of which would result in significant environmental effects. Impacts would be less than significant.

Electricity and Natural Gas. PG&E would provide electricity and natural gas services to the project site. The project would connect to existing electricity and natural gas infrastructure located in the vicinity of the site. The Project Applicant would contract with PG&E to arrange connection to existing electricity and natural gas facilities for provision of services to the project site and would comply with all connection requirements and associated fees. Compliance with PG&E and Fresno County requirements for service connections for electricity and natural gas service provision would ensure that project impacts would not result in significant environmental effects. As such, the project would not include the construction of new electricity and natural gas facilities, construction of which would result in significant environmental effects. Impacts would be less than significant.

Summary. The proposed project would not require or result in the relocation or construction of new or expanded facilities for water, wastewater treatment, storm drainage, electric power and natural gas, construction which would result in significant environmental effects. Therefore, impacts related to construction or expansion of utility facilities would be less than significant.

> **Impact UTL-1**: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
>
> **Level of Significance Without Mitigation:** Less Than Significant

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Most of the water used at the project site would be used during the peak of the harvest season, which occurs between September and October. It is anticipated that Phase I of the proposed project would require between 1,000 and 1,250 gallons per minute (gpm) of water for processing during the peak harvest season, totaling 78.03 MG (239.5 AF) annually. By Phase IV, the proposed project is expected to use between 4,000 and 5,000 gpm of water during the peak harvest season, which equates to approximately 311.4 MG (955.5 AF) annually.

Water for both the proposed project's processes and for fire suppression would be supplied by an existing deep irrigation well located on the northwest quadrant of the site. A Well Completion Report[10] prepared for the existing well onsite in 2015 identified that the well's yield capacity is approximately 1,800 gpm. As previously discussed, it is estimated that the project would require a total annual water supply of 78.03 MG or 239.5 AF to serve the project site during Phase I. Based on estimated water yields for the existing well onsite outlined in the Well Completion Report, the project would have sufficient capacity to meet projected water demands during Phase I. Additionally, a new domestic well would be developed on the project site for potable water purposes, which would further offset project water needs.

[10] California Department of Water Resources (DWR). 2015. Well Completion Report. Owner's Well Number – E0323591. Local Permit Agency – County of Fresno. Permit Number – 33692. November 25.

By Phase IV, it is estimated that the project would require a total annual water supply of 311.4 MG or 955.5 AF to serve the project site. Given that most of the water used at the project site would be used over a six-week period between September and October, during peak harvest season, the existing groundwater well with the 1,800-gpm pumping capacity is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two 500,000-gallon storage tanks for operational water retention.[11]

Groundwater extraction for project operation requires compliance with the GSP for the Westside Subbasin, which underlies the project site. The GSP sets sustainability goals consistent with sustainable groundwater management criteria designed to help the Subbasin achieve groundwater sustainability within 20 years of the GSP adoption. All jurisdictions located within the Subbasin, including Fresno County, must comply with the GSP's sustainability goals for groundwater management, which include groundwater allocations that equally distribute the total annual pumping from the Subbasin on the basis of land acreage overlying the Subbasin. The projected water budget for groundwater and surface water allocations is established using models that analyze historical water data during dry and wet years to determine projected inflows and outflows in the surface and groundwater budgets through surface water deliveries, evapotranspiration, percolation from precipitation, natural streamflow and irrigation, and groundwater pumping in the Subbasin, among other factors. The projected water budget also considers the impacts of climate change and future projections of land use and population in the Subbasin. As such, compliance with groundwater allocations established by the GSP would ensure that the project would have sufficient water supplies available to meet projected water demand under reasonably foreseeable single and multiple dry-year scenarios. As previously discussed in Section 4.10.3.2 (e) of Section 4.10, Hydrology and Water Quality, by Phase IV, project groundwater demand (955.5 acre-feet per year [AFY]) would surpass permitted allocation for the project parcel (189.72 AFY); however, the Project Applicant would coordinate the approval of a Groundwater Credit Program for the project with the Westland Water District Groundwater Sustainability Agency (GSA), which allows augmented groundwater allocations to land owners that implement GSP-approved groundwater replenishment strategies, such as the proposed surface application of wastewater to irrigate the Project Applicant's surrounding orchards. As such, the proposed project would not conflict with the Westside Subbasin GSP or with GSP groundwater allocations, and the project would have sufficient water supply to serve the site during normal, dry and multiple dry years scenarios. Impacts would be less than significant.

Impact UTL-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Level of Significance Without Mitigation: Less Than Significant

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

[11] County of Fresno. September 13, 2023. Personal communication with Ejaz Ahmad, Planner.

The proposed project would not require services from a wastewater treatment provider. The project proposes the collection, filtering and reuse of process wastewater from operation of the pistachio processing facility for irrigation of surrounding orchards. The proposed project would generate approximately 311.4 MG of process wastewater annually after buildout of Phase IV. The process wastewater used at the pistachio processing facility would first be pumped through screen filters to remove organic debris, then would be directed towards settling ponds onsite for the removal of additional impurities, and finally would be pumped via an existing water delivery system and distributed via drip irrigation towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards. The surface application of process wastewater would be subject to RWQCB approval of the Project Applicant's WDR Application and issuance of the Notice of Approval of the WDR to the County or a designee to demonstrate proof of coverage under the WDR. Furthermore, the Project Applicant would be required to prepare and submit a Wastewater and Nutrient Management Plan to the RWQCB for approval to implement project WDR, with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, and calculations for monthly and annual water and nutrient balances, to ensure that proposed process wastewater application does not surpass the hydraulic loading or nutrient holding capacity of the approximately 3,700-acre discharge area. Additionally, sewage wastewater from the project would be managed separately from process wastewater through the installation of a septic system onsite constructed pursuant to requirements of the FCPWP. Therefore, the proposed project would not exceed the service capacity of a wastewater treatment provider, and the impact would be less than significant.

Impact UTL-3: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Level of Significance Without Mitigation: Less Than Significant

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The majority of solid waste generated in the project site would consist of organic waste. Organic waste generated during a harvest season after buildout of Phase IV of the proposed project is estimated to be approximately 8,562,667 pounds. The organic waste material obtained from the cleaning process would be transported off-site to firms that provide composting services or to ranches for cattle feed. Compost generated from the project's organic waste would be used as fertilizer in the Project Applicant's surrounding crop fields.

Additionally, the minimal quantities of recyclable and non-recyclable solid waste generated onsite would be collected by Mid Valley Disposal and delivered to a Mid Valley Disposal facility, the nearest located at 15300 W. Jensen Avenue in the City of Kerman, or a landfill approved by the County, such as the American Avenue Landfill, located approximately 21 miles from the project site.

American Avenue Landfill is owned and operated by the County and began operation in 1992 for public and commercial solid waste haulers. The landfill has a total capacity of 41.1 million cubic

yards and handles on average 1,700 tons of waste per day.[12] It is estimated that the landfill will be able to continue operation until 2031.[13]

Given the available capacity at the landfills, the additional solid waste generated by the proposed project is not anticipated to cause the facility to exceed its daily permitted capacity. The proposed project would also be required to comply with the CALGreen Code (Title 24, Part 11) and the Fresno County C&D Debris Recycling Program, which is intended to assist the County in achieving solid waste reduction goals pursuant to AB 939. Therefore, the project would not generate solid waste in excess of State or local standards or capacity of local infrastructure, and the impact would be less than significant.

Impact UTL-4: The project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Level of Significance Without Mitigation: Less Than Significant

e. Would the project not comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

As discussed above, the proposed project would be required to comply with the CALGreen Code, and the Fresno County C&D Debris Recycling Program, which is intended to assist the County in achieving AB 939 solid waste reduction goals. The proposed project would also comply with General Plan Policy PF-F.4, which requires compliance with provisions of the County's Integrated Waste Management Plan (Fresno County C&D Debris Recycling Program). As such, the proposed project would dispose of waste in accordance with applicable federal, State, and local recycling, reduction, and waste requirements and policies, and the impact would be less than significant.

Impact UTL-5: The project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

Level of Significance Without Mitigation: Less Than Significant

4.14.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to utilities and service systems. The geographic scope for considering project-related cumulative impacts on water supply is the Westlands hydrologic region for surface water and the Westside Subbasin for groundwater. The geographic scope for considering project-related cumulative impacts on other utilities is Fresno County.

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12 County of Fresno. 2000. General Plan: Background Report. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/8398-background_report_june04.pdf (accessed October 2023).

13 City of Fresno. n.d. Solid Waste Facilities. Website: https://www.fresno.gov/publicutilities/trash-disposal-recycling/solid-waste-facilities/#american-avenue-landfill (accessed October 2023).

Water Supply. Water supply is a regional issue. The project is located within the Westside Subbasin, of the San Joaquin Valley Groundwater Basin, and is under the jurisdiction of the Westland Water District GSA. The Westside Subbasin has been identified by the DWR as a critically overdrafted subbasin. Water for both the proposed project's processes and for fire suppression would be supplied by an existing deep irrigation well located on the northwest quadrant of the site. Based on estimated annual water demand for the project during Phase I, as well as results of the Well Completion Report prepared for the existing on-site well, the project would have sufficient supplies to meet project demand during Phase I. By Phase IV, it is estimated that the project would require a total annual water supply of 311.4 million gallons or 955.5 acre-feet to serve the project site. The existing groundwater well on site is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water pump and the construction of two additional 500,000-gallon storage tanks for operational water retention. Construction of minor water utility facilities is not expected to contribute to cumulative impacts related to water supply infrastructure with compliance with County construction requirements and implementation of construction mitigation measures included in this EIR.

Additionally, all groundwater extraction for project operation requires compliance with the Groundwater Sustainability Plan (GSP) for the Westside Subbasin. The GSP sets sustainability goals consistent with sustainable groundwater management criteria designed to help the Westside Subbasin achieve groundwater sustainability within 20 years of the GSP adoption. All jurisdictions located within the Westside Subbasin must comply with the GSP's sustainability goals for groundwater management, which include groundwater allocations that equally distribute the total annual pumping from the Subbasin on the basis of land acreage overlying the Subbasin. With Westland Water District GSA's approval of a Groundwater Credit Program for the project, the proposed project would not conflict with the GSP of the Westside Subbasin or with groundwater allocations of the Westside Subbasin. As such, the project would not contribute to cumulative impacts to water supply in the Subbasin.

Wastewater. As previously discussed, wastewater from the project site would not be processed by any public wastewater treatment provider. The approximately 311.4 MG of process wastewater generated by the pistachio processing facility would be discharged towards the Project Applicant's surrounding approximately 3,700 acres of pistachio orchards for crop irrigation, subject to RWQCB approval of project WDR, and subject to the preparation and approval of a Wastewater and Nutrient Management Plan by the RWQCB, with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, and calculations for monthly and annual water and nutrient balances, to ensure that proposed process wastewater application does not surpass the hydraulic loading or nutrient holding capacity of the discharge area.

Because the proposed process wastewater land application would occur through an existing irrigation delivery system, the project would not require the construction of additional distribution infrastructure that may result in significant environmental effects. Sewage wastewater generated on site would be managed separately from process wastewater through installation of a septic system constructed pursuant to results of site-specific percolation testing and requirements of the FCPWP. Additionally, the proposed project would comply with applicable federal, State, and local surface and groundwater quality standards and regulations. As such, construction of wastewater facilities

for the project would not contribute to cumulative impacts related to constructing new wastewater facilities.

Solid Waste. Development associated with the proposed project would contribute to an increased demand for landfill capacity for solid waste. As stated previously, 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. As discussed above, the majority of waste generated at the project site would be organic waste, which would be composted and used as fertilizer for the Project Applicant's fields or repurposed as cattle feed. Only a minimal quantity of recyclable and non-recyclable waste from the project would be hauled to Fresno County-approved landfills. As such, given the available capacity at the Fresno County-approved landfills, the additional solid waste generated by the proposed project is not anticipated to cause the facility to exceed its daily permitted capacity. As such, the project would not contribute to cumulative impacts to exceeding capacity of solid waste infrastructure in Fresno County.

In addition, 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 (AB 939), every city and county in the State is required to divert 50 percent of solid waste generated in its jurisdiction away from landfills. Implementation of source reduction measures, such as recycling, would serve to divert solid waste away from landfills. The project would be required to comply with existing statutes and regulations, and therefore would not contribute to cumulative impacts related to compliance with solid waste reduction regulations. Impacts would be less than significant and would not be cumulatively considerable.

Electricity and Natural Gas. Development of cumulative projects within the PG&E service area, which encompasses 70,000 square miles, would result in a substantial increase in electricity and natural gas demand as well as an increase in the consumption of fuel for vehicles. Although the proposed project would result in a net increase in demand for electricity, implementation of the proposed project would not result in the construction of new electric or natural gas infrastructure beyond what has already been assumed and will be included in PG&E's regional forecasts.

> **Impact UTL-6:** The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to utilities.
>
> **Level of Significance Without Mitigation:** Less Than Significant

5.0 ALTERNATIVES

In accordance with the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines* (Section 15126.6), an Environmental Impact Report (EIR) must describe a range of reasonable alternatives to the project, or to the location of the project, that would "feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project." An EIR does not need to consider every conceivable alternative to a project; rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives required in an EIR is governed by a "rule of reason."

The proposed project would consist of building a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. The proposed project has been described and analyzed in Chapter 4.0 with an emphasis on determining and evaluating potential significant impacts resulting from the project and identifying mitigation measures to avoid or reduce these impacts to less than significant levels. The following identifies and discusses three feasible alternatives to the proposed project, compares the impacts of each alternative to the impacts of the project, and determines whether the alternatives meet the basic project objectives and avoid or reduce project-related significant impacts.

5.1 SELECTION OF ALTERNATIVES

Section 21100 of the Public Resources Code (PRC) and Section 15126.6 of the *State CEQA Guidelines* require an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project and that would avoid or substantially lessen any of the significant environmental impacts. When selecting a set of alternatives to analyze, Section 15126.6(f) of the *State CEQA Guidelines* also discusses the consideration of alternative locations and determining whether any of the significant effects of a proposed project would be avoided or substantially lessened by putting the project in another location.

Based on the criteria listed above, three alternatives have been selected to avoid or substantially lessen the significant impacts of the proposed project. Therefore, the alternatives considered in this Draft EIR include the following:

- **No Project Alternative:** Under the No Project Alternative, the project site would not be developed, and existing land uses would remain. No modifications to existing site access or infrastructure would occur.

- **Reduced Project Alternative:** Under the Reduced Project Alternative, only Phase I of the proposed project would be developed. Proposed site access would remain the same as that identified for the proposed project. Infrastructure improvements would be limited to those required to serve the project under Phase I.

- **Off-Site Alternative:** Under the Off-Site Alternative, the project would be developed at an alternate location, Assessor's Parcel Number (APN) 019-160-31S, an approximately 477.4-acre site located approximately 1 mile east of the project site, as shown on Figure 5-1. Proposed phasing and development under this alternative would remain the same as identified for the proposed project.

5.2 PROPOSED PROJECT

5.2.1 Project Characteristics

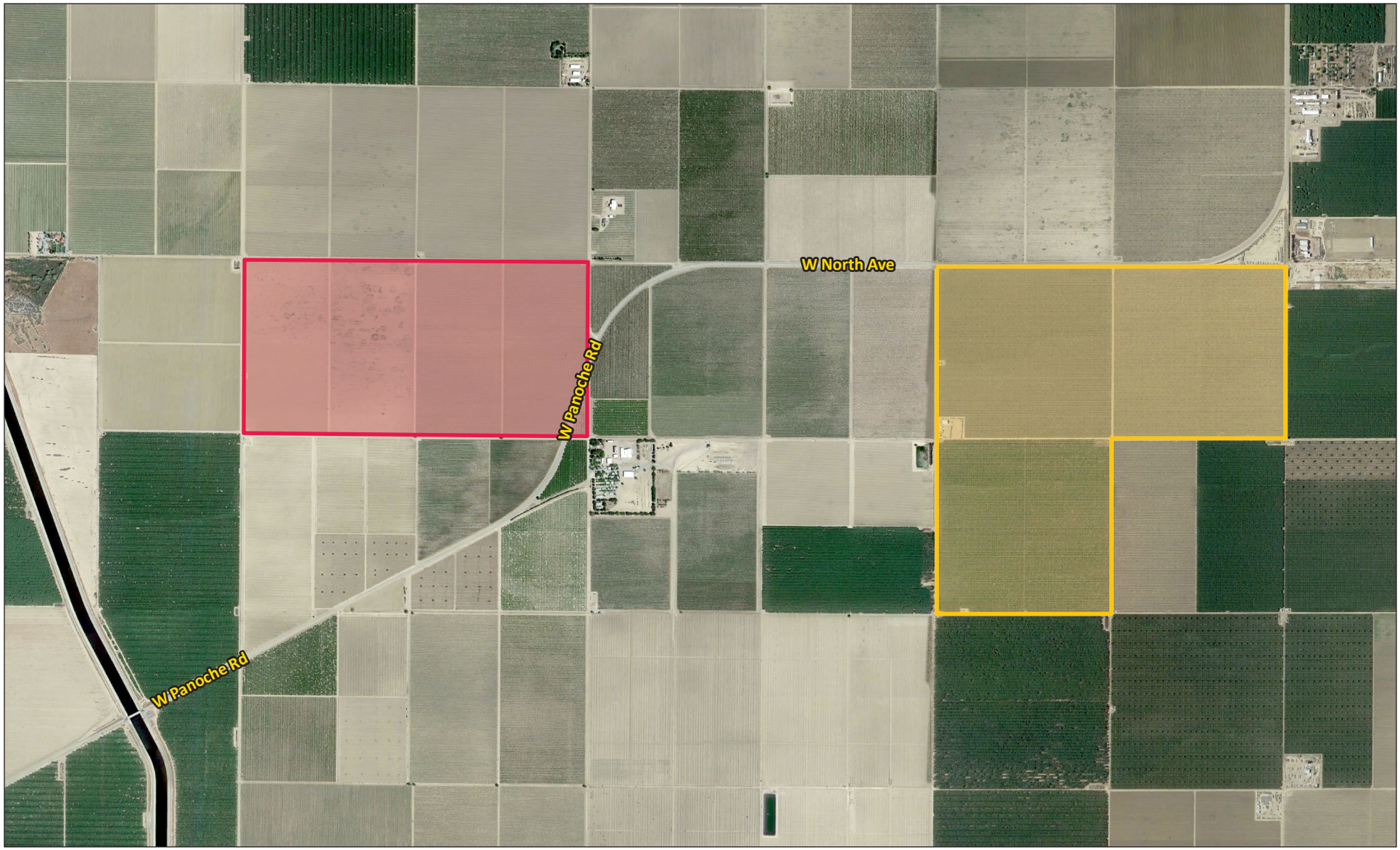
The proposed project would consist of building a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Trucks carrying pistachios from the Project Applicant's orchards would deposit their load on a conveyor belt system that would transport the pistachios through different sections of the proposed facility that include a huller building, a propane-powered dryer area, a drive-over dump pit area, and an area with storage silos. The proposed project would be implemented in four phases, and each phase would include the construction and addition of buildings, working areas and equipment to increase the capacity of the project site.

Phase I would occur in 2024 and would include the construction of an approximately 5,608 square foot drive-over dumping pit area, where trucks carrying pistachios would unload goods into four approximately 9 by 10-foot pit stations. A 3,900 square foot pre-cleaning area would contain equipment to eliminate large debris from the pistachio loads. A huller building with an area of approximately 22,940 square feet and approximately 42 feet in height would also be constructed. The building would be of industrial-style construction with insulated metal panel exterior walls. Ten approximately 26-foot long, 8-foot wide and 29-foot tall dryers and eighteen approximately 52-foot wide and 50-foot tall galvanized steel silos, each of 2,200,000- pound capacity, would be added to the project site west of the proposed huller building.

Phase II would occur between 2025 and 2027, and would include the construction of the processing building, an approximately 155,169 square foot, steel-framed, industrial-style building with insulated metal panel exterior walls. The processing building would be located south of the huller building constructed during Phase I.

Phase III would occur between 2028 and 2029 and would include the installation of the processing equipment inside the processing building constructed during Phase II. This equipment includes scales, baggers, hoppers, roasters, and forklifts. Additionally, ten dryers and twelve silos with the same dimensions and style of those constructed during Phase I would be added adjacent to the existing dryers and storage silos in the project site.

Phase IV would occur between 2030 and 2031 and would include the construction of a second huller building, a second drive-over dumping pit area, and an additional pre-cleaning area with the same dimensions as the facilities constructed during Phase I. Additionally, twenty dryers and thirty silos with the same dimensions and style of those constructed during Phase I would be added to the north of the existing dryer and storage silo areas of the project site.



LSA

FIGURE 5-1

Project Site Boundary

Off-Site Alternative Location

N

0 1000 2000

FEET

S. Stamoules, Inc. Pistachio Processing Facility Project

Off-Site Alternative Location

SOURCES: Google Earth, 4/21/2021; LSA, 2023

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Additionally, the processed water from the proposed facility would be conveyed via existing subsurface piping to irrigate approximately 3,740 acres of agricultural land owned by the Project Applicant, located approximately 2 to 6 miles northeast of the project site. The treated wastewater would be conveyed from the project site to surrounding crop fields through existing surface piping. The surface application of wastewater would be subject to the approval of a project Waste Discharge Requirements (WDR) issued by the Regional Water Quality Control Board (RWQCB).

5.2.2 Project Objectives

The following is a list of project objectives of the proposed project:

- Construct a pistachio hulling, processing, and packing facility on the proposed project site that can process pistachio crops harvested in the 7,500 acres of orchards owned by Stamoules Produce Company, and at full buildout, be able to process approximately 13,000 acres of the Project Applicant's additional pistachio orchards.

- Reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site.

- Allow the Project Applicant the undisrupted operation of a privately-owned pistachio processing facility.

5.2.3 Significant Unavoidable Impacts of the Proposed Project

As described in Chapter 4.0, Evaluation of Environmental Impacts, impacts in the following areas would be potentially significant without the implementation of mitigation measures but would be reduced to a less than significant level if the mitigation measures recommended in this report are implemented: Section 4.3 Air Quality, Section 4.4 Biological Resources, Section 4.5 Cultural and Tribal Cultural Resources, and Section 4.7 Geology and Soils. Impacts in the following area would be significant unavoidable impacts: Section 4.8 Greenhouse Gas Emissions.

For the purpose of this analysis, it is assumed that all of the alternatives would comply with applicable federal, State, and local regulations, policies, and ordinances. It is also assumed that all mitigation measures required for implementation of the proposed project would apply to the project alternatives and similar corresponding reductions in impacts would be achieved through such mitigation. Therefore, the following discussion focuses on the ability of the alternatives to reduce significant unavoidable project impacts.

5.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

State CEQA Guidelines Section 15126.6(c) provides that an EIR "should also identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts."

The following provides a description of potential alternatives that were identified and considered by the County of Fresno (County), and the reasons why they were ultimately not selected for further evaluation in this EIR. In dismissing these alternatives from detailed evaluation in this EIR, primary considerations were whether the alternatives would meet *most* of the project objectives, or whether the alternatives were *feasible*, or whether they would *reduce the significant impacts* of the proposed project. The following alternatives were considered but were dismissed from further consideration as explained below.

- **Different Location Within Project Parcel Alternative:** This alternative proposes the development of the project site on a different location within APN 019-150-64S, the project parcel. This alternative was not considered feasible due to potential transportation impacts to the surrounding roadway system and access constraints that would occur for trucks entering and leaving the site. Although relocation of the proposed project within the project parcel could serve to fulfill the project objectives, relocation of the project site away from West Panoche Road would hinder operations of the proposed facility due to access constraints for trucks and service vehicles traveling to and from the site. Additionally, relocation of the project could increase traffic along minor roads that don't have the capacity to support additional truck trips and vehicle traffic, potentially resulting in significant transportation impacts.

- **Different Design Alternative:** This alternative proposed the implementation of a different project design that would minimize significant noise-related impacts generated by the proposed project through the relocation of noise generating work areas away from sensitive receptors and the implementation of enclosures and sound barriers around noise-generating equipment. This alternative was not considered feasible due to there being too many variables that could affect the efficiency of operations, as well as health and safety standards at the facility should the major noise generators at the project site (i.e., the drive-over pit area, the dryer area, and the processing building) be relocated and/or enclosed with sound barriers.

5.4 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

The following provides a description of the No Project Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the No Project Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the No Project Alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the proposed project.

5.4.1 No Project Alternative Description

The No Project Alternative assumes that the proposed project would not be developed and that the project site would generally remain in its current condition. The project site would continue to be agriculture and rural residential uses. No modifications to existing site access or infrastructure would occur.

5.4.2 Analysis of the No Project Alternative

The potential impacts associated with the No Project Alternative are described below.

5.4.2.1 Aesthetics

Under the No Project Alternative, no construction activities would occur, and the project site would remain undeveloped. The proposed project would result in less than significant impacts related to changes in views of and around the project, character of the site, and lighting. As a result, with implementation of the No Project Alternative, no impacts to aesthetics would occur; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.2 Agriculture and Forestry Resources

Under the No Project Alternative, no construction activities would occur, and the project site would remain undeveloped. The project site is currently under a Williamson Act contract, and the development of the site for a value-added agricultural facility would result in a less than significant impact related to conversion of agricultural use to non-agricultural uses. No forestry resources are located within the project site. With implementation of the No Project Alternative, impacts to agriculture and forestry would not occur; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.3 Air Quality

Under the No Project Alternative, no construction activities would occur, and the site would remain undeveloped. Therefore, the proposed project's construction and operational criteria pollutant and ground-borne vibration impacts would be avoided under this alternative. With implementation of the No Project Alternative, impacts to air quality would not occur from this facility; therefore, this alternative would result in fewer impacts when compared to the proposed project. It should be noted that under this alternative, pistachio crops produced by the Project Applicant would continue to be processed at another existing processing facility with existing equipment, located at twice the distance from the project site, which would result in pollutant emissions from trucks transporting pistachios for longer distances.

5.4.2.4 Biological Resources

Under the No Project Alternative, no construction or grading activities would occur on the project site. As a result, the proposed project's potentially significant impacts to special-status species and nesting birds would be avoided under this alternative, and implementation of Mitigation Measures BIO-1.1 and BIO-1.2 would not be required. In addition, under the No Project Alternative, no construction activities would occur that would impact a sensitive natural community, interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. With implementation of the No Project Alternative, impacts to biological resources would not occur; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.5 Cultural Resources

No construction or grading activities would occur on the project site under the No Project Alternative. Therefore, the proposed project's potential impacts that would result from construction at the project site, including potentially significant impacts related to disturbance of previously unknown archaeological resources and human remains would be avoided under this alternative, and

implementation of Mitigation Measures CUL-1 and CUL-3 would not be required. With implementation of the No Project Alternative, impacts to cultural resources would not occur; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.6 Energy

Under the No Project Alternative, no construction activities would occur, and the site would remain undeveloped. There would be no energy usage associated with construction or operation of the No Project Alternative; therefore, no impacts to energy would occur. When compared to the proposed project, this alternative would result in fewer impacts to energy. It should be noted that under this alternative, the Project Applicant's pistachio crops would continue to be processed at an existing processing facility located twice the distance from the project site, where existing equipment would be older and less energy-efficient that than that proposed by the project.

5.4.2.7 Geology and Soils

Under the No Project Alternative, no construction or grading activities would occur on the project site. As a result, the proposed project's potential impacts that would result from construction at the project site, including potentially significant impacts to unknown unique paleontological resources, or unique geologic features, would be avoided under this alternative, and implementation of Mitigation Measure GEO-6 would not be required. Additionally, under this alternative, no construction activities would result in soil erosion or expose people working on the project site to geologic hazards. Therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.8 Greenhouse Gas Emissions

Under the No Project Alternative, no construction activities would occur, and the site would remain undeveloped. There would be no greenhouse gas (GHG) emissions associated with construction and operation of the proposed project. The proposed project's potentially significant operational GHG emission impacts would be avoided under this alternative. Therefore, implementation of the No Project Alternative would avoid the significant and unavoidable GHG impact associated with the proposed project. Therefore, this alternative would result in fewer impacts when compared to the proposed project. It should be noted that under this alternative, the Project Applicant's pistachio crops would continue to be processed at an existing processing facility with existing equipment, located twice the distance from the project site, which would result in greenhouse gas emissions generated by longer travel distances.

5.4.2.9 Hazards and Hazardous Materials

Under this alternative, changes in land use would not occur, and the existing conditions related to the accidental release of, or exposure to, hazardous materials would remain the same. Although the existing agricultural operations would continue to operate, the use of solvents or fuels related to maintenance of operations as proposed by the project would not occur. Therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.10 Hydrology and Water Quality

Under this alternative, the existing pervious surfaces and agricultural orchard land use in the project site would not be altered. With no physical changes occurring within the project site, the existing drainage patterns of the project site would not be altered. In addition, this alternative would not create a potential to violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality because this alternative would not change the existing conditions within the project site. Therefore, this alternative would result in fewer impacts related to hydrology and water quality when compared to the proposed project.

5.4.2.11 Land Use and Planning

Under this alternative, the land uses within the project site would not change. Similar to the proposed project, this alterative would not divide an existing community or conflict with an existing land use plan. As a result, this alternative would result in similar impacts when compared to the proposed project.

5.4.2.12 Mineral Resources

There are no mineral resources located within the project site, and no mineral resources would be adversely affected under either this alternative or the proposed project. As a result, this alternative would similarly result in no impacts to mineral resources.

5.4.2.13 Noise

Under the No Project Alternative, no construction activities would occur, and the site would remain undeveloped. There would be no noise associated with the construction and operation of the proposed project. The proposed project's less than significant construction and operational noise impacts would be avoided under this alternative. In addition, the proposed project's construction and operational less than significant vibration impacts would also be avoided under this alternative. With implementation of the No Project Alternative, there would be no impacts related to noise; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.14 Population and Housing

Under this alternative, population and housing would not be affected, similar to the proposed project. This project would not displace any people or result in new residential units. As a result, this alternative would result in similar impacts related to population and housing when compared to the proposed project.

5.4.2.15 Public Services

Under this alternative, the population of the project site would not change and there would be no increased demand for public services, including fire protection, police protection, public schools, and parks and recreational facilities. The proposed project would introduce employees who would be present at the project site during the hours of operation and who would potentially increase the demand for public services, but a less than significant impact would occur. When compared to the proposed project, this alternative would result in fewer impacts because it would not introduce employees who would work on the project site.

5.4.2.16 Recreation

Under this alternative, the land uses within the project site would not change and would not affect recreational facilities and open space. As a result, when compared to the proposed project, this alternative would result in similar impacts related to construction and/or expansion of the recreational facilities.

5.4.2.17 Transportation

Under the No Project Alternative, no uses would be developed on the project site that would generate higher traffic levels that create and contribute to unsatisfactory level of service (LOS) conditions in roadways and contribute to cumulative vehicle miles traveled (VMT) impacts in Fresno County. Therefore, implementation of the No Project Alternative would avoid the less than significant LOS and VMT impacts associated with the proposed project. Therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.18 Tribal Cultural Resources

No construction or grading activities would occur on the project site under the No Project Alternative. Therefore, the proposed project's potential impacts that would result from construction at the project site, including potentially significant impacts related to disturbance of previously unknown tribal cultural resources, would be avoided under this alternative, and implementation of Mitigation Measures CUL-1 and CUL-3, which address impacts to previously unknown tribal cultural resources, would not be required. With implementation of the No Project Alternative, there would be no impacts to tribal cultural resources; therefore, this alternative would result in fewer impacts when compared to the proposed project.

5.4.2.19 Utilities and Service Systems

Under this alternative, no land uses or physical changes would occur within the project site; therefore, no increased demand for utilities and service systems, including water supply, stormwater, and electricity and natural gas would occur. The proposed project would include the construction of a new well for water supply, construction of stormwater collection infrastructure and an infiltration basin on site, and construction of electricity and natural gas connections with Pacific Gas and Electric (PG&E) to accommodate development of the project site. As a result, this alternative would result in fewer impacts to utilities when compared to the proposed project.

5.4.2.20 Wildfire

The project site is located in an area mapped by the California Department of Forestry and Fire Protection (CAL FIRE) as Local Responsibility Area (LRA) Unzoned, indicating that the area is not susceptible to wildland conflagrations, and is not located within a Very High Fire Hazard Severity Zone (VHFHSZ). Under this alternative, no changes to the existing uses within the project site would occur. Similar to the proposed project, this alternative would not exacerbate wildfire risks. Because the proposed project would result in physical changes to the project site and this alternative would not, this alternative would result in fewer impacts related to wildfire when compared to the proposed project.

5.4.3 Comparison to Project Objectives

As discussed above, the No Project Alternative would avoid all of the less than significant and significant unavoidable impacts of the proposed project. However, the No Project Alternative would also not achieve any of the objectives of the proposed project. The No Project Alternative would not: (a) construct a pistachio hulling, processing, and packing facility that can process pistachio crops harvested from the 7,500 acres of orchards owned by Stamoules Produce Company or, at full buildout, be able to process approximately 13,000 acres of additional pistachio orchards on the proposed project site; (b) develop the project site, and as such would not reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site; and (c) allow the Project Applicant the undisrupted operation of a privately-owned pistachio processing facility. As a result, this alternative would not meet the objectives of the proposed project.

5.5 ALTERNATIVE 2: REDUCED PROJECT ALTERNATIVE

The Reduced Project Alternative is being studied as a viable alternative to the proposed project in compliance with requirements of CEQA, and would involve the construction and operation of only Phase I of the proposed project. The Reduced Project Alternative would reduce the work areas developed and the buildout processing capacity of the proposed project. Under this alternative, pistachio processing would be limited to the cleaning, drying, de-hulling, and storage of pistachios. Value-added operations like the roasting and bagging of pistachios would not happen under this alternative. Infrastructure improvements under this alternative would be limited to those required to serve the project under Phase I.

5.5.1 Analysis of the Reduced Project Alternative

The potential impacts associated with the Reduced Project Alternative are described below.

5.5.1.1 Aesthetics

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site. Although this alternative would reduce the density of development in the project site, like the proposed project, this alternative would still develop the site from agricultural orchard to agricultural processing facility and would introduce lighting on the project site. As such, this alternative would result in similar, less than significant impacts related to a change in views of and around the project, the character of the site, and lighting when compared to the proposed project.

5.5.1.2 Agriculture and Forestry Resources

Similar to the proposed project, this alternative would result in the development of the project site, with a value-added agricultural facility consistent with permitted uses for the site's Exclusive Agricultural zoning (AE-20). Additionally, because this alternative would still develop the project site, which is in a parcel under a Williamson Act contract, implementation of Mitigation Measure AG-2 for non-renewal of the Williamson Act contract at APN 019-150-64S would still be required under this alternative. No forestry resources are located within the project site. As a result, this alternative

would result in similar, less than significant impacts to agriculture and forestry when compared to the proposed project.

5.5.1.3 Air Quality

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site. However, due to the reduced development under this alternative, this alternative may result in reduced construction and operational emissions, including those due to vehicle trips and stationary equipment, compared to those under the proposed project. However, construction of this alternative would still require implementation of San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII dust control measures to reduce short-term construction period air quality impacts. Additionally, this alternative would still require the preparation of an action plan to deal with objectionable odors from the proposed settling ponds for process wastewater on site. Thus, this alternative would still require the implementation of Mitigation Measure AIR-4 to reduce the impacts to less than significant levels. All other air quality impacts would be reduced compared to those of the proposed project and would be less than significant. As a result, this alternative would result in fewer impacts when compared to the proposed project.

5.5.1.4 Biological Resources

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site that could result in potentially significant impacts to nesting birds and special-status roosting bat species using the existing trees on site. Reduced development from this alternative could potentially reduce the development footprint on site and allow for avoidance of trees that could be occupied by nesting birds and roosting bats. However, implementation of Mitigation Measures BIO-1.1 and BIO-1.2 would still be required. In addition, construction activities associated with the Reduced Project Alternative would have a similar less than significant impact related to the movement of any native resident or migratory fish or wildlife species. Like the proposed project, this alternative would not affect a riparian habitat, federally protected wetlands, or conflict with an adopted Habitat Conservation Plan (HCP).

5.5.1.5 Cultural Resources

Although the Reduced Project Alternative could result in a reduced construction footprint on the site, similar to the proposed project, this alternative would still involve construction and operational activities on the project site that could potentially disturb previously unknown historical and archaeological resources and human remains, and result in significant impacts. As such, Mitigation Measures CUL-1 and CUL-3 would also be required for this alternative to reduce the impacts to less than significant levels. With implementation of this alternative, potential impacts to cultural resources would occur; therefore, this alternative would result in similar impacts when compared to the proposed project.

5.5.1.6 Energy

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site. However, due to the reduced project size under this alternative, this alternative would result in reduced construction and operational energy use as a

result of fewer mobile sources (e.g., trucks and service vehicles) and less construction of structures. As a result, this alternative would result in less energy consumption and fewer impacts when compared to the proposed project.

5.5.1.7 Geology and Soils

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site that could impact previously unknown unique paleontological resources or unique geologic features. As such, implementation of Mitigation Measure GEO-6 would be required to reduce potential impacts to less than significant levels. With implementation of this alternative, potential impacts to geology and soils would occur; therefore, this alternative would result in similar impacts when compared to the proposed project.

5.5.1.8 Greenhouse Gas Emissions

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site. However, due to the reduced project size under this alternative, this alternative would result in reduced construction and operational GHG emissions, including those due to mobile sources (e.g., trucks and service vehicles), stationary sources (e.g., conveyors, pre-cleaners, dryers and other processing equipment), area sources (e.g., facility maintenance activities), indirect emissions from sources associated with energy consumption, waste sources (landfilling and waste disposal), and water sources (water supply extraction and conveyance). The Reduced Project Alternative would still require consistency with the 2022 Scoping Plan, which requires the project to implement design features to meet State GHG reduction and equity prioritization goals. Although to a lesser extent than the proposed project, development of this alternative would still have a high-power demand required to effectively operate the types of equipment needed to process and dry the pistachio products. Additionally, like the proposed project, the addition of electric vehicle charging spaces would still be infeasible under this alternative. As such, this alternative would not meet the Scoping Plan's natural gas or electric vehicle design criteria, and a **significant and unavoidable impact would still occur**. All other GHG emissions would be lower than the proposed project.

5.5.1.9 Hazards and Hazardous Materials

Under the Reduced Project Alternative, construction or operational activities would occur on the project site; therefore, the Reduced Project Alternative would have similar, less than significant impacts related to the potential to expose the public or environment to hazardous building materials or emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. In addition, the Reduced Project Alternative would have a similar less than significant impact related to the potential to conflict with an airport land use plan, impair or interfere with emergency response or evaluation, and would not expose people or structures to wildfires. Thus, impacts related to hazards and hazardous materials would be comparable to the proposed project and would be less than significant.

5.5.1.10 Hydrology and Water Quality

Although to a lesser extent than the proposed project, this alternative would introduce impervious surfaces to the project site through development of existing agricultural orchard land uses into a pistachio processing facility. Similar to the proposed project, this alternative would increase runoff in the project site and would require the construction of stormwater infrastructure as well as implementation of Best Management Practices (BMPs) for erosion management and stormwater pollution control pursuant to the County and General Construction Permit's requirements. Additionally, the discharge of process wastewater would still occur under this alternative and, as such, the application for and approval of a WDR by the RWQCB and preparation and implementation of a Wastewater and Nutrient Management Plan would still be required. However, due to the reduced development footprint under this alternative, this alternative would result in fewer impacts related to water supply and stormwater generation. As a result, this alternative would result in fewer impacts related to hydrology and water quality when compared to the proposed project.

5.5.1.11 Land Use and Planning

Under this alternative, the existing agricultural orchard land use in the project site would be developed into a pistachio processing facility. However, similar to the proposed project, this alternative would not divide an existing community or conflict with the County's agriculture land use designation for the project site. As a result, this alternative would result in similar less than significant impacts when compared to the proposed project.

5.5.1.12 Mineral Resources

There are no mineral resources located within the project site, and no mineral resources would be adversely affected under this alternative or the proposed project. As a result, this alternative would similarly result in no impacts to mineral resources.

5.5.1.13 Noise

Construction activities under the Reduced Project Alternative would involve the use of generally the same types of construction equipment and vehicles as the proposed project, and construction activities would occur at the same distances from the nearest receptors as under the proposed project. As a result, the daily construction noise levels generated under this alternative would be comparable to that generated by the construction of the proposed project, and this alternative would also result in less than significant construction and operational noise and vibration impacts at the nearby sensitive receptors. However, because the size of the development included under this alternative would be reduced and limited to development of Phase I of the proposed project, the duration of construction would be reduced, and the duration of exposure to noise and vibration impacts would be shorter. With implementation of this alternative, potential noise impacts would be fewer when compared to the proposed project.

5.5.1.14 Population and Housing

Similar to the proposed project, this alternative would construct a pistachio processing facility in the project site and would not include residential uses that would result in direct population growth.

Additionally, this alternative would also not displace existing housing or include the extension of infrastructure beyond what's needed to serve the project site during Phase I, and would not indirectly result in population growth. As such, this alternative would similarly result in no impacts related to population and housing. With implementation of this alternative, potential impacts related to population and housing would be similar to the proposed project.

5.5.1.15 Public Services

Like the proposed project, this alternative would not include a residential component that would result in direct population growth. Additionally, although this alternative would employ a maximum of 14 employees that may increase the demand for public services, like the proposed project, this demand would result in less than significant impacts to public services, including fire protection, police protection, public schools, parks, and recreational facilities. With implementation of this alternative, potential impacts to public services would be similar to the proposed project.

5.5.1.16 Recreation

Like the proposed project, this alternative would not include a residential component that would substantially increase demand for recreational facilities. Like the proposed project, this alternative would employ up to 14 employees, who are not expected to substantially increase the demand for nearby facilities. With implementation of this alternative, similar to the proposed project, potential impacts related to recreation would be less than significant.

5.5.1.17 Transportation

Under the Reduced Project Alternative, the project site would be developed at a smaller scale than what was proposed in the proposed project, with only Phase I being constructed. As such, this alternative would generate lower traffic levels than those of the proposed project. Additionally, the Reduced Project Alternative would generate lower VMT than the proposed project due to reduced vehicle traffic. As such, the Reduced Project Alternative would generate fewer less than significant transportation impacts when compared to the proposed project.

5.5.1.18 Tribal Cultural Resources

Similar to the proposed project, the Reduced Project Alternative would involve construction and operational activities on the project site. Due to the reduced project size proposed under this alternative, this alternative could result in a reduced construction footprint. However, construction of this alternative would still result in ground-disturbing activities that could impact previously unknown tribal cultural resources. However, this alternative would implement Mitigation Measures CUL-1 and CUL-3 to reduce potential impacts to less than significant levels. With implementation of this alternative, potential impacts to tribal cultural resources would occur; therefore, this alternative would result in similar impacts when compared to the proposed project.

5.5.1.19 Utilities and Service Systems

Under this alternative, the land uses and physical changes that would occur within the project site would be similar to the proposed project and utility infrastructure, including stormwater facilities, groundwater wells, and associated water pumping and storage infrastructure. New connections to

existing electricity and natural gas infrastructure in the project vicinity would be constructed. However, because this alternative would consist of a reduced project when compared to the proposed project, the required infrastructure and demand related to water supply, wastewater, stormwater, electricity, and natural gas would be less than the proposed project. As a result, this alternative would result in fewer impacts related to utilities and service systems when compared to the proposed project.

5.5.1.20 Wildfire

The project site is in an area mapped by CAL FIRE as Local Responsibility Area (LRA) Unzoned, indicating that the area is urbanized and not susceptible to wildland conflagrations, and is not within a VHFHSZ. Similar to the proposed project, this alternative would not exacerbate wildfire risks. Because this alternative would result in physical changes that would be similar to the proposed project, this alternative would result in similar impacts.

5.5.2 Comparison to Project Objectives

As discussed above, the Reduced Project Alternative would limit development in the project site to planned development under Phase I of the proposed project. The Reduced Project Alternative would construct a pistachio hulling and processing facility that will have partial capacity to process the Project Applicant's surrounding pistachio orchards; however, by limiting development under this alternative to Phase I of the proposed project, pistachio packing facilities would not be included with the project, and the facility would not have capacity to process the Project Applicant's approximately 13,000 acres of pistachio orchards. Additionally, this alternative will reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site; and would allow the Project Applicant the undisturbed operation of a privately-owned pistachio processing facility. Because this alternative would provide the Project Applicant with a privately-owned pistachio processing facility located on the Project Applicant's property, but would limit the processing features of the facility as well as reduce it processing capacity, this alternative would only partially meet project objectives.

5.6 ALTERNATIVE 3: OFF-SITE ALTERNATIVE

The Off-Site Alternative would involve the development of the project in an alternate location (i.e., Assessor's Parcel Number [APN] 019-160-31S), an approximately 477.4-acre site located approximately 1 mile east of the project site. The Off-Site Alternative would include the same phasing and proposed development included with the proposed project.

5.6.1 Analysis of the Off-Site Alternative

The potential impacts associated with the Off-Site Alternative are described below.

5.6.1.1 Aesthetics

Similar to the proposed project, the Off-Site Alternative would involve construction and operational activities on the project site. Similar to the proposed project, the Off-Site Alternative location is currently being used for agricultural crop operations. Development of a pistachio processing facility at this location would introduce lighting as well as changes to the views and character of the

location. However, the structures and equipment associated with this alternative would be consistent and compatible with the agriculture-related structures and uses in the vicinity and would match the agricultural-industrial character of the surrounding area. Additionally, like the project site, the Off-Site Alternative location is zoned within the County's Exclusive Agricultural District (AE-20), and the construction of a pistachio processing facility, which could be characterized as a value-added agricultural facility, would be allowed in this zoning district. As such, this alternative would result in similar less than significant impacts related to a change in views of and around the project, the character of the site, and the lighting on site when compared to the proposed project.

5.6.1.2 Agriculture and Forestry Resources

Similar to the proposed project, the Off-Site Alternative location is zoned within the Exclusive Agricultural District (AE-20) of Fresno County and is currently under a Williamson Act contract. This alternative would result in the development of the Off-Site Alternative location with a value-added agricultural facility consistent with permitted uses for the site's Exclusive Agricultural District (AE-20) zoning, and would require implementation of a mitigation measure similar to Mitigation Measure AG-2 for the proposed project for the non-renewal of the Williamson Act contract at the Off-Site Alternative location. Similar to the project site, the Off-Site Alternative location does not contain forestry resources. As a result, this alternative would result in similar less than significant impacts to agriculture and forestry when compared to the proposed project.

5.6.1.3 Air Quality

The Off-Site Alternative would involve construction and operational activities on the Off-Site Alternative location. Under this alternative, the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas. As such, construction and operational emissions, including those due to vehicle trips and stationary equipment, would be similar to those under the proposed project, and construction of the alternative would require implementation of SJVAPCD Regulation VIII dust control measures to reduce short-term construction period air quality impacts and the preparation of an action plan to deal with objectionable odors from the proposed settling ponds for process wastewater on site. However, the Off-Site Alternative location is located approximately 1 mile east of the nearest sensitive receptors, unlike the project site, which is approximately 480 feet from sensitive receptors. As such, due to the greater distance from sensitive receptors under this alternative, this alternative would result in fewer impacts when compared to the proposed project.

5.6.1.4 Biological Resources

The Off-Site Alternative location is actively being used for agricultural crop operations, and as such, development of the site could potentially result in significant impacts to biological resources. A site-specific study for the Off-Site Alternative location would be required, with recommendations by a qualified biologist, to meet CEQA and County project-level environmental review requirements. However, this site-specific study could determine that development of the Off-Site Alternative location would result in significant impacts to special-status species currently using the site. The project site for the proposed project currently contains trees that could be occupied by nesting birds

and roosting bats. The project-specific Biological Resources Assessment[1] (BRA) determined that implementation of Mitigation Measures BIO-1.1 and BIO-1.2 would reduce potential impacts to a less than significant level. As such, considering the potentially significant impacts that could occur upon development of the Off-Site Alternative compared with the less than significant with mitigation impacts of the proposed project, this alternative could result in greater potential impacts to special-status species than the proposed project. All other impacts, including impacts to protected wetlands, riparian habitat, and other sensitive natural communities, wildlife corridors, and adopted HCPs under this alternative would be less than significant, similar to the proposed project.

5.6.1.5 Cultural Resources

Similar to the proposed project, this alternative consists of an agricultural site with no known historical or archaeological resources; however, ground-disturbing activities from construction of this alternative could potentially disturb previously unknown historical and archaeological resources, and human remains at the Off-Site Alternative location. As such, a site-specific cultural resources study for the Off-Site Alternative location would be required to ensure mitigation measures similar to Mitigation Measures CUL-1 and CUL-3 for the proposed project are implemented, ensuring compliance with regulatory requirements for the accidental discovery of historical and archaeological resources, and human remains. As such, considering the proximity between the project site and the Off-Site Alternative location, the similar agricultural uses at these locations, and the fact that both the proposed project and this alternative would need to comply with federal, State, and local regulatory requirements protecting historical and archaeological resources, and human remains, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.6 Energy

The Off-Site Alternative would involve construction and operational activities at the Off-Site Alternative location. Under this alternative, the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas. As such, construction and operational energy impacts under this alternative would be similar to the proposed project. As a result, this alternative would result in a similar energy consumption and similar impacts when compared to the proposed project.

5.6.1.7 Geology and Soils

The Off-Site Alternative would involve construction and operational activities at the Off-Site Alternative location. Similar to the proposed project, development of this alternative could result in potential impacts to unique paleontological resources or unique geologic features; however, similar to the proposed project, this alternative would need to implement a mitigation measure similar to Mitigation Measure GEO-6, which ensures compliance with federal, State, and local regulatory requirements for the protection of paleontological resources and unique geologic features. As such, considering the proximity between the project site and the Off-Site Alternative location, the similar

[1] LSA Associates, Inc. 2021. *Biological Resources Assessment for the Proposed Pistachio Processing Facility, 98-Acres West of West Panoche Road, Fresno County, California*. September 13.

agricultural uses at these locations, and the fact that both the proposed project and this alternative would need to comply with federal, State, and local regulatory requirements protecting paleontological resources and unique geologic features, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.8 Greenhouse Gas Emissions

The Off-Site Alternative would involve construction and operational activities on the Off-Site Alternative location. Under this alternative, the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas. As such, operational GHG emissions under this alternative would result in similar **significant and unavoidable impacts** compared to those under the proposed project due to the alternative design not meeting the Scoping Plan's natural gas or electric vehicle design criteria. As such, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.9 Hazards and Hazardous Materials

Similar to the proposed project, this alternative would include changes in land use at the Off-Site Alternative location that could result in the accidental release of, or exposure to, hazardous materials would remain the same. Because the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas, this alternative would have similar, less than significant impacts related to the potential to expose the public or environment to hazardous building materials or emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. In addition, the Reduced Project Alternative would have a similar less than significant impact related to the potential to conflict with an airport land use plan, impair or interfere with emergency response or evaluation, and would not expose people or structures to wildfires. Therefore, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.10 Hydrology and Water Quality

Similar to the proposed project, this alternative would introduce impervious surfaces to the Off-Site Alternative location through development of the existing agricultural orchard land uses into a pistachio processing facility. Similar to the proposed project, this alternative would increase runoff in the Off-Site Alternative location and would require the construction of stormwater infrastructure designed pursuant to County and General Construction Permit requirements, and implementation of BMPs for erosion management and stormwater pollution control compliant with State, regional, and local regulatory requirements addressing erosion and stormwater pollution management.

Additionally, like the proposed project, this alternative also proposes the surface application of process wastewater and as such would need to obtain coverage under the RWQCB's WDR Program through the preparation and approval of a WDR Application, and the preparation of a Wastewater and Nutrient Management Plan to implement the WDR before any discharge of wastewater occurs.

As such, considering that development of the proposed project and the Off-Site Alternative would result in similar development of pistachio processing facilities at similar agricultural locations, and the fact that both the proposed project and this alternative would need to comply with federal,

State, and local regulatory requirements addressing stormwater infrastructure design, stormwater pollution control, and water quality protection, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.11 Land Use and Planning

Under this alternative, the existing agricultural orchard land use in the Off-Site Alternative location would be developed into a pistachio processing facility. However, similar to the proposed project, the Off-Site Alternative location is zoned under the AE-20 zoning district of Fresno County, which allows development of value-added agricultural facilities in this zoning district subject to approval of a conditional use permit. Additionally, similar to the proposed project, this alterative would not divide an existing community or conflict with the County's Agriculture land use designation for the site. As a result, this alternative would result in similar less than significant impacts when compared to the proposed project.

5.6.1.12 Mineral Resources

Under this alternative, development would occur at the Off-Site Alternative location, which like the project site, is located in an area of Fresno County where no mineral resources have been identified.[2] As such, development of the Off-Site Alternative location would not affect any known mineral resources in Fresno County. As a result, this alternative would result in similar impacts to mineral resources compared to the proposed project.

5.6.1.13 Noise

Under this alternative, the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas. As such, construction activities under the Off-Site Alternative would involve the use of generally the same types of construction equipment and vehicles as the proposed project. At this location, the nearest sensitive receptors include residential uses approximately 0.56-mile to the northeast, and residential uses within Pilibos Ranch, which is located approximately 1 mile west of the Off-Site Alternative location. As a result, due to the greater distance from sensitive receptors at the Off-Site Alternative location, the daily construction noise levels generated under this alternative would be fewer than that generated by the construction of the proposed project. Additionally, this alternative would also result in fewer less than significant construction and operational noise and vibration impacts at the nearby sensitive receptors. With implementation of this alternative, potential noise impacts would be fewer when compared to the proposed project.

5.6.1.14 Population and Housing

Similar to the project site, the Off-Site Alternative location currently has an agricultural orchard land use and does not contain any existing residential uses. Under this alternative, the Off-Site Alternative location would be developed into a pistachio processing facility like the one proposed under the proposed project, with the same phasing and proposed structures and work areas. Similar

[2] County of Fresno. 2000. General Plan: Background Report. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/8398-background_report_june04.pdf (accessed October 2023).

to the proposed project, this alternative would not include residential uses that would result in direct population growth. Additionally, this alternative would also not displace existing housing or include the extension of infrastructure beyond what's needed to serve the Off-Site Alternative location, and would not indirectly result in population growth. As such, this alternative would similarly result in no impacts related to population and housing. With implementation of this alternative, potential impacts related to population and housing would be similar to the proposed project.

5.6.1.15 Public Services

Like the proposed project, this alternative would not include a residential component that would result in direct population growth. Additionally, although this alternative would employ a maximum of 14 employees that may increase the demand for public services, this demand increase is expected to be within the capacity of the Fresno County Fire Protection District (FCFPD) and Fresno County Sheriff's Department (FCSD) given the alternative's consistency with the Off-Site Alternative location's land use and zoning. Additionally, like the proposed project, development under this alternative would be required to pay applicable Public Facilities Impact Fees pursuant to Chapter 17.90, Public Facilities Impact Fees, of the County of Fresno Code of Ordinances and applicable school developer fees per California Government Code, Section 65995. Therefore, potential impacts to public services under this alternative would be similar to the proposed project.

5.6.1.16 Recreation

Like the proposed project, this alternative would not include a residential component that would substantially increase demand for recreational facilities. Like the proposed project, this alternative would employ up to 14 employees, who are not expected to substantially increase the demand for nearby facilities. With implementation of this alternative, similar to the proposed project, potential impacts related to recreation would be less than significant.

5.6.1.17 Transportation

The Off-Site Alternative location is approximately 1 mile east of the project site. Vehicles accessing the Off-Site Alternative location would do so through West North Avenue. Under the Off-Site Alternative, the Off-Site Alternative location would be developed like the project site, with the same phasing and proposed structures and work areas. As such, this alternative would generate similar traffic levels as those of the proposed project, and would generate similar VMT when compared to the proposed project. As such, the Off-Site Alternative would generate similar, less than significant transportation impacts when compared to the proposed project.

5.6.1.18 Tribal Cultural Resources

Similar to the proposed project, this alternative would involve ground-disturbing activities that could potentially disturb unknown tribal cultural resources at the Off-Site Alternative location and result in significant impacts. As such, a site-specific cultural resources study for the Off-Site Alternative location would be required to ensure that mitigation measures similar to Mitigation Measures CUL-1 and CUL-3 for the proposed project are implemented, thereby ensuring compliance with regulatory requirements for the accidental discovery of tribal cultural resources. As such, considering the proximity between the project site and the Off-Site Alternative location, the similar agricultural uses

at these locations, and the fact that both the proposed project and this alternative would need to comply with federal, State, and local regulatory requirements protecting tribal cultural resources, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.19 Utilities and Service Systems

Under this alternative, the land uses and physical changes that would occur within the Off-Site Alternative location would be similar to the proposed project, and the utility infrastructure for the Off-Site Alternative location (including stormwater facilities, groundwater wells, and associated water pumping and storage infrastructure) and new connections to existing electricity and natural gas infrastructure in the site vicinity would be similar to infrastructure for the proposed project. Considering the proximity of the project site to the Off-Site Alternative location, the similarities between both sites, and the fact that, like the proposed project, the Off-Site Alternative would need to comply with providers' connection requirements for utilities and State and local regulatory requirements for construction of stormwater systems and water supply infrastructure, this alternative would result in similar impacts when compared to the proposed project.

5.6.1.20 Wildfire

Similar to the project site, the Off-Site Alternative location is in an area mapped by CAL FIRE as LRA Unzoned, indicating that the area is urbanized and not susceptible to wildland conflagrations, and is not within a VHFHSZ.[3] Similar to the proposed project, this alternative would not exacerbate wildfire risks. Because this alternative would result in physical changes that would be similar to the proposed project, this alternative would result in similar impacts.

5.6.2 Comparison to Project Objectives

As discussed above, the Off-Site Alternative would involve the development of the project in an alternate location, at APN 019-160-31S, which is an approximately 477.4-acre site located approximately 1 mile east of the project site. The Off-Site Alternative would construct a pistachio hulling and processing facility that will have the capacity to process the Project Applicant's surrounding 7,500 acres of pistachio orchards, and at full buildout have the capacity to process the Project Applicant's approximately 13,000 acres of additional pistachio orchards. Additionally, this alternative will reduce public and private development and operational costs of the pistachio processing facility through the selection of a Project Applicant-owned project site, and would allow the Project Applicant the undisturbed operation of a privately-owned pistachio processing facility. As such, this alternative would fulfill all project objectives.

5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the analysis of the alternatives analyzed, the No Project Alternative would have the fewest impacts and would be the environmentally superior alternative. Under CEQA, if the No Project Alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from among the other alternatives (*State CEQA Guidelines* Section

[3] California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fresno County State Responsibility Area Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/ (accessed October 2023).

15126.6(e)(2)). Table 5.A provides, in summary format, a comparison of the level of impacts for each alternative to the proposed project.

Table 5.A: Comparison of the Environmental Impacts of the Proposed Project to the Project Alternatives

Environmental Topic	Proposed Project Level of Impact After Mitigation	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Off-Site Alternative
Aesthetics	Less than Significant	Fewer	Similar	Similar
Agriculture and Forestry	Less than Significant	Fewer	Similar	Similar
Air Quality	Less than Significant	Fewer	Fewer	Fewer
Biological Resources	Less than Significant	Fewer	Similar	Greater
Cultural Resources	Less than Significant	Fewer	Similar	Similar
Energy	Less than Significant	Fewer	Fewer	Similar
Geology and Soils	Less than Significant	Fewer	Similar	Similar
Greenhouse Gas Emissions	Significant Unavoidable	Fewer	**Fewer, Significant and Unavoidable**	**Similar, Significant and Unavoidable**
Hazards and Hazardous Materials	Less than Significant	Fewer	Similar	Similar
Hydrology and Water Quality	Less than Significant	Fewer	Fewer	Similar
Land Use and Planning	Less than Significant	Similar	Similar	Similar
Mineral Resources	Less than Significant	Similar	Similar	Similar
Noise	Less than Significant	Fewer	Fewer	Fewer
Population and Housing	Less than Significant	Fewer	Similar	Similar
Public Services	Less than Significant	Fewer	Similar	Similar
Recreation	Less than Significant	Fewer	Fewer	Similar
Transportation	Less than Significant	Fewer	Fewer	Similar
Tribal Cultural Resources	Less than Significant	Fewer	Similar	Similar
Utilities and Service Systems	Less than Significant	Fewer	Fewer	Similar
Wildfire	Less than Significant	Fewer	Similar	Similar
Attainment of Project Objectives	Meets all of the Project Objectives	Meets none of the Project Objectives	Partially meets the Project Objectives	Meets all of the Project Objectives

Source: Compiled by LSA (2023).
Legend: Greater= Greater impacts than the proposed project
Fewer = Fewer impacts than the proposed project
Similar = Similar impacts as the proposed project

The Off-Site Alternative, as described above, would fulfill all project objectives. This alternative would require development at the Off-Site Alternative location, a site for which existing conditions are currently unknown. As such, site-specific environmental review pursuant to CEQA and County requirements would be needed. This alternative would result in similar impacts to the proposed project under most resource topics, except Air Quality, Noise, and Biological Resources. Under this alternative, Air Quality and Noise impacts would be fewer due to the greater distance of the Off-Site Alternative location from sensitive receptors when compared to the proposed project.

For Biological Resources, impacts under this alternative would be greater when compared to the proposed project due to the higher potential of the Off-Site Alternative location to result in impacts to sensitive species. Under this alternative, all project objectives would be fulfilled.

The Reduced Project Alternative would develop the project site with only Phase I of the proposed project. The alternative would have fewer impacts than the proposed project on Air Quality, Energy,

Noise, Greenhouse Gas, Hydrology and Water Quality, and Transportation due to the reduced project and development footprint of this alternative on the project site when compared to the proposed project. Impacts under the remaining resource topics would be similar to the proposed project. Under this alternative, project objectives would be partially fulfilled.

When comparing the two alternatives with the proposed project, although the Reduced Project Alternative would not fulfill all project objectives, it would result in the highest reduction of potential environmental impacts. As such, the Reduced Project Alternative would be the environmentally superior alternative.

6.0 CEQA-REQUIRED ASSESSMENT CONCLUSIONS

Section 15126 of the *State CEQA Guidelines* requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. This chapter provides an overview of the potential impacts resulting from the implementation of the proposed project based on the analyses presented in Chapter 4.0 of this EIR. The topics covered in this chapter include impacts found not to be significant, growth inducement, significant and unavoidable impacts, and significant irreversible changes. A more detailed analysis of the effects the proposed project would have on the environment and proposed mitigation measures to minimize significant impacts are provided in Sections 4.1 through 4.14 of this EIR.

6.1 GROWTH INDUCEMENT

Section 15126.2(d) of the *State CEQA Guidelines* requires that an EIR discuss the ways in which a proposed project or the construction of additional housing, either directly or indirectly, could foster economic or population growth in the surrounding environment. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are only sparsely developed or are underdeveloped. Typically, development projects on sites that are designated for development and surrounded by existing suburban uses are not considered adversely growth-inducing because growth in areas that already have development and infrastructure available to serve new development are generally considered environmentally beneficial. This section evaluates the potential of the proposed project to create such growth inducements. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth inducement occur only where the growth associated with the proposed project would cause adverse environmental impacts.

As described below in Section 6.4, Effects Found Not to Be Significant, the proposed project would not include a residential component that would result in direct population growth. The proposed project would only employ 14 employees, who would commute from nearby cities and communities to the project site and would not require the construction of housing on the project site. Development of the proposed project would involve construction activities that could generate some temporary employment opportunities. However, given the temporary nature of such opportunities, it is unlikely that construction workers would need to relocate to nearby cities or communities. Thus, the proposed project would not be considered growth-inducing from an employment or housing perspective.

As discussed below in Section 6.4, Effects Found Not to Be Significant, and Section 4.14, Utilities and Service Systems, of this Environmental Impact Report (EIR), the County of Fresno (County) would provide police protection and fire protection services to the project site. Pacific Gas and Electric (PG&E) would be the electricity and natural gas provider for the project site. The proposed project would construct lined settling pools to filter wastewater from project operation and redistribute it to surrounding orchards for irrigation uses. Sewage produced on site would be managed by a septic system constructed pursuant to County of Fresno specifications and requirements.

Operation of the proposed project could result in an increase in demand for public services in Fresno County. The Project Applicant would be required to pay applicable Public Facilities Fees prior to issuance of building permits to account for project impacts to public services facilities. The Project Applicant would also be required to pay applicable connection fees to PG&E to connect to existing natural gas and electricity facilities in the vicinity of the project site. The proposed project would consist of the operation of an agricultural facility similar to other agricultural operations in the vicinity of the project site. The project would be consistent with permitted uses for the project site's General Plan land use designation and zoning, pursuant to the approval of a Conditional Use Permit by the County. Because the proposed pistachio processing facility is compatible with planned land uses for the project site, the provision of services and construction of utilities' infrastructure for the proposed project would not induce substantial unplanned population growth in an area, either directly or indirectly, and this impact would be less than significant.

Development of the proposed project would involve construction activities that could generate some temporary employment opportunities. However, given the temporary nature of such opportunities, it is unlikely that construction workers would need to relocate to cities and communities near the project site because of the proposed project. Thus, the proposed project would not be considered growth-inducing from an employment perspective.

6.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(d) of the *State CEQA Guidelines* requires an EIR to discuss the extent to which the proposed project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three California Environmental Quality Act (CEQA) required categories of irreversible changes are discussed below.

6.2.1 Changes in Land Use Which Commit Future Generations

The proposed project would involve the development of a pistachio processing facility in a project site currently used for active agricultural production. Although the proposed project would stop active agricultural production on the project site, the proposed project would introduce a value-added agricultural use that would be consistent with uses permitted under the County's zoning ordinance for the Exclusive Agricultural District (AE-20) pursuant to the approval of a Conditional Use Permit. Therefore, the proposed project would not result in a land use change that would commit future generations to using the project site for any uses other than the County's planned agricultural uses.

6.2.2 Irreversible Damage from Environmental Accidents

Construction activities associated with implementation of the proposed project would involve some risk for environmental accidents. However, as discussed in Section 4.9, Hazards and Hazardous Materials, of this EIR, accidental spills and soil contamination would be addressed by federal, State, and County requirements, and handling, transport and disposal of hazardous materials on the project site would follow professional industry safety standards and requirements per federal, State and local laws. Although there is a possibility for contaminated soil to be encountered during grading, excavation, and/or ground disturbance associated with implementation of the proposed project, it is likely that such contamination may have resulted from agricultural operations within

the project site. However, the risks of accidental contamination from handling construction materials or transport of these materials off site would be reduced to a less than significant level through compliance with the many federal, State, and local regulations regarding the handling and disposal of such construction materials. Additionally, potential release of pollutants during project construction would be addressed through compliance with regulatory measures that address erosion control and stormwater pollution management during construction and operation of the project, as outlined in Section 4.10, Hydrology and Water Quality. As a result, the proposed project would not pose a substantial risk of environmental accidents.

6.2.3 Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes issues related to increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. The proposed project would require electricity and natural gas services, as well as additional resources for construction. Construction and ongoing maintenance would irreversibly commit some materials and non-renewable energy resources. Materials and resources used during implementation of the proposed project would include, but are not limited to, non-renewable and limited resources such as oil, gasoline, sand, gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, and utilities. During the operational phase of the proposed project, energy sources including diesel and gasoline would be used for lighting, heating, and cooling of facilities and equipment on site, as well as transportation of people to and from the project site.

As discussed in Section 4.6, Energy, of the EIR, diesel, gasoline, natural gas, and electricity consumption associated with the proposed project would result in a negligible increase in yearly demand for these resources in Fresno County. Therefore, the projected demand of the proposed project would not result in a significant adverse impact related to the provision of diesel, gasoline, natural gas, or electricity. In addition, the proposed project would comply with Title 24 of the California Code of Regulations (CCR), which requires conservation practices that would limit the amount of energy (California Energy Code Building Energy Efficiency Standards [Title 24, Part 6]) consumed through implementation of the proposed project. With the development of more cost-effective and accessible technologies, pursuant to the Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608), dependence on non-renewable resources used in association with future development envisioned under the proposed project may also be reduced. Furthermore, the proposed project would be required to undergo project-specific analysis (as required by CEQA) and comply with all applicable California Green Building Standards Code (CALGreen Code) building efficiency standards (Title 24, Part 11). Nevertheless, the use of such resources would continue to represent a long-term commitment of essentially non-renewable or slowly renewable resources.

Implementation of the proposed project would also result in an increased demand for potable water and water for pistachio processing. Water for project operations would be extracted from one existing well located within the project site. Further, an additional well would be constructed on site for potable water supply. Annual water use at the project site would be approximately 311.4 million gallons (955.5 acre-feet) annually at project buildout. As discussed in Section 4.10, Hydrology and Water Quality, the existing groundwater well on site is expected to yield sufficient water to serve operational water demands of the project by Phase IV with minor modifications to the well's water

pump and the construction of two 500,000-gallon storage tanks for operational water retention. Additionally, as discussed in Section 4.14, Utilities and Service Systems, the project would have sufficient water supplies available to meet future demand during normal, dry, and multiple dry years subject to the preparation and approval by the Westland Water District Groundwater Sustainability Agency (GSA) of a Groundwater Credit Program for the project, which would allow augmented groundwater allocations for the project with the implementation of groundwater replenishment strategies authorized by the Westside Subbasin Groundwater Sustainability Plan (GSP).

Although the construction and operation of the proposed project would involve the use of non-renewable resources, through the inclusion of energy-conserving features of the proposed project, and compliance with applicable standards and regulations, the proposed project would not represent an unjustified use of such non-renewable resources.

6.3 SIGNIFICANT UNAVOIDABLE IMPACTS

The environmental effects of the proposed project, along with recommended mitigation measures, are discussed in detail in Chapter 4.0, Evaluation of Environmental Impacts, and summarized in Chapter 2.0, Executive Summary. The following environmental issues were determined to result in less than significant impacts, or can be reduced to less than significant levels with the incorporation of mitigation measures:

- Aesthetics
- Agriculture and Forestry Resources (*mitigation required*)
- Air Quality (*mitigation required*)
- Biological Resources (*mitigation required*)
- Cultural Resources and Tribal Cultural Resources (*mitigation required*)
- Energy
- Geology and Soils (*mitigation required*)
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use Planning
- Noise
- Transportation
- Utilities and Service Systems

Section 15126.2(c) of the *State CEQA Guidelines* requires that an EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels, as a result of implementation of the project. The following environmental issue was determined to result in a significant and unavoidable impact, and no feasible mitigations could be identified.

- Greenhouse Gas Emissions

6.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

In accordance with Section 15128 of the *State CEQA Guidelines*, an EIR must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. The County has determined that the proposed project would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in Chapter 4.0 of this EIR; however, the rationale for eliminating these topics is briefly discussed below.

6.4.1 Mineral Resources

The Surface Mining and Reclamation Act (SMARA) regulates surface mining in California. SMARA was adopted in 1975 to protect the State's need for a continuing supply of mineral resources and to protect the public and environmental health. In compliance with SMARA, the State Mining and Geology Board established Mineral Resource Zones (MRZ) to classify lands that contain mineral deposits. The project site is not within an MRZ nor does it contain an MRZ.[1] Furthermore, based on information from the United States Geologic Survey (USGS) Mineral Resources Online Spatial Data,[2] there are no known mineral resource areas on the project site or in the project vicinity. Therefore, the proposed project would not result in the loss of availability of a known mineral resource, and the impact would be less than significant. This issue is not further discussed in this EIR.

6.4.2 Population and Housing

The proposed project would not include any residential uses that would result in direct population growth. Furthermore, the proposed project does not include the extension of infrastructure that would indirectly induce population growth. Therefore, potential impacts related to unplanned population growth would be less than significant. Additionally, the project site does not contain existing housing and, as such, development of the project site would not displace substantial numbers of existing people or housing, thereby necessitating the construction of replacement housing elsewhere. The impacts would be less than significant. This issue is not further discussed in this EIR.

6.4.3 Public Services

Fire and police protection services for the project would be provided by the Fresno County Fire Protection District (FCFPD) and Fresno County Sheriff's Department (FCSD), respectively. The FCFPD serves an area of 2,655 square miles and provides fire protection for more than 220,000 citizens. The closest fire station to the project site is Station 96 of the FCFPD, 8.5 miles from the project site in Mendota. The FCSD serves the unincorporated population of Fresno County with 329 sworn deputies for a ratio of 1.09 deputies per 1,000 residents. The nearest service station is the FCSD Area 1 substation, located in San Joaquin, 19 miles southeast of the project site. The proposed project consists of the construction and operation of a pistachio processing facility, which would introduce up to 14 employees during hours of operation in the project site. Although increases in demand for fire and police protection services from the project are expected to be low given the non-residential use of the project site, projected number of employees and proposed hours of operation, the proposed project could still potentially increase demand for fire protection and police protection services. The Project Applicant would be required to pay applicable Public Facilities Impact Fees pursuant to Chapter 17.90, Public Facilities Impact Fees, of the Fresno County Code of Ordinances. Payment of fees would address potential impacts to police and fire protection facilities resulting from the proposed project.

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1 County of Fresno. 2000. General Plan: Background Report. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/8398-background_report_june04.pdf (accessed September 2023).

2 United States Geological Survey (USGS). n.d. Mineral Resources Online Spatial Data. Website: https://mrdata.usgs.gov/ (accessed April 8, 2022).

The closest school to the project site is Mendota High School, located 8 miles northeast from the site, and belongs to the Mendota Unified School District. Given that the project would not introduce housing at the project site, it is not expected that implementation of the proposed project would increase the demand for school services, park facilities and other public facilities in Fresno County. However, as applicable, the Project Applicant would pay school developer fees per California Government Code Section 65995, and any other applicable impact fees to address potential impacts on schools, parks, and other public facilities. Impacts would be less than significant. This issue is not further discussed in this EIR.

6.4.4 Recreation

The proposed project does not include public recreational facilities or require the construction or expansion of public recreational facilities, which might have an adverse physical effect on the environment. The proposed project consists of the construction of a pistachio hulling, processing, and packing facility that can process pistachio crops from the Project Applicant's surrounding pistachio orchards. Given that the project would not include housing on the project site, it is not expected to result in a substantial increase in demand for recreational facilities so as to require the construction of new or expanded facilities. The project, in and of itself, would not create the need to construct additional recreational facilities elsewhere that would have an adverse physical impact on the environment. Impacts would be less than significant. This issue is not further discussed in this EIR.

6.4.5 Wildfire

The project site is located in an area mapped by the California Department of Forestry and Fire Protection (CAL FIRE) as Local Responsibility Area (LRA) Unzoned, and is not located within a Very High Fire Hazard Severity Zone (VHFHSZ).[3] The project site is also located on a relatively flat area and is not adjacent to any hills. The project site is also not located within a flood hazard zone and would not be susceptible to flooding due to post-fire drainage changes. The project would not impede access to any nearby roadways that may serve as emergency access routes in the project vicinity. The project would also not require the installation of on-site or off-site infrastructure that would exacerbate fire risk or result in significant environmental impacts. Additionally, the proposed project would comply with County fire safety regulations for project construction and operation. Therefore, the proposed project would not exacerbate wildfire risks and potentially expose project occupants to wildfires. Impacts related to wildfire would be less than significant. This issue is not further discussed in this EIR.

[3] California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fresno County State Responsibility Area Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/ (accessed May 2023).

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