DRAFT ENVIRONMENTAL IMPACT REPORT NO. 7896

Kamm Avenue Pistachio Processing Plant

February 2021

PREPARED FOR:

County of Fresno
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February 2021

Project Reference No. 035-2003

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Executive Summary

EXECUTIVE SUMMARY

Introduction

This Draft Environmental Impact Report (EIR) has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public, regulatory agencies and the County of Fresno decision makers of the potential environmental impacts the proposed Project would have on environmental factors as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts to the environmental resources identified in the CEQA Guidelines environmental checklist. The County of Fresno is the "Lead Agency" pursuant to CEQA and is responsible for the preparation and distribution of the EIR.

CEQA Process

A Notice of Preparation (NOP) was prepared by the County for the proposed Project. The NOP was properly noticed and circulated pursuant to CEQA Guidelines for public review from September 14, 2020 – November 2, 2020. Scoping meetings were held on September 28, 2020 and October 19, 2020.

The next step in the process is circulation of this EIR which will be distributed to the public for review and comment for at least 45 days. This EIR is organized as follows:

Executive Summary: Summarizes the analysis contained in the EIR.

Chapter 1 – Introduction: Provides a brief introduction to CEQA and the scope/contents of the DEIR.

Chapter 2 – Project Description: Describes the Project in detail. Includes Project location, objectives, environmental setting and regulatory context.

Chapter 3 – Environmental Analysis: Contains the CEQA checklist. Each topic discusses environmental/regulatory setting, Project impact analysis, mitigation measures and conclusions.

Chapter 4 – Alternatives: Describes and evaluates alternatives to the Project. The proposed Project is compared to each alternatives and potential environmental impacts are analyzed.

Chapter 5 – Other CEQA Sections: Describes other required sections such as environmental effects that cannot be avoided, social effects, growth inducement, etc.

Chapter 6 – Preparers: Lists the preparers of the EIR and identifies the consultants who prepared technical studies for the EIR.

Appendices: Following the text of the EIR, several appendices and technical studies have been included as reference material.

Project Location

The proposed Project site is located on the Central Valley floor in western unincorporated Fresno County, California, between the California Aqueduct and Interstate 5 (I-5). The unincorporated community of Three Rocks, a U.S. Census designated place with a population of approximately 250, is located approximately 1.5 miles to the south of the KAPP facility's primary pistachio hulling and processing equipment. The nearest major roadway intersection is West Kamm Avenue and State Route 33, approximately one mile to the east. I-5 is located approximately 2.5 miles to the southwest on the eastern edge of the Diablo Range foothills. The California Aqueduct is located approximately 1 mile to the northeast. The general latitude and longitude for the Project site is 36.523532° and -120.411545°. The Project is in the Levis, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle. Refer to Figures 2-1 and 2-2 in Chapter Two – Project Description.

Project Description Summary

Kamm Avenue Pistachio Processing, LLC (Applicant) is proposing to construct and operate a pistachio processing facility to process nuts from nearby orchards. The Applicant proposes to construct, operate, and maintain a pistachio processing plant with the capacity to process 60 million pounds of finished pistachio products per year. The Project would provide pistachio processing capacity in the immediate vicinity of existing pistachio orchards that currently ship harvested crops for processing to more remote locations, including processing plants located outside of Fresno County. The Project would operate year-round to package and process harvested pistachios for retail and wholesale customers. During an approximately 6-week harvest period, which typically occurs from August to October, the Project would operate seven days a

week and 24 hours per day to receive, hull, heat, dry and store pistachio crops in onsite storage silos. During non-harvest operations, the Project would operate two shifts per day, five or six days per week depending on pistachio product market conditions. The Project would have a full-time workforce of 60 employees. An additional 60 workers would be employed during the 6-week harvest period. The primary pistachio processing facilities would be located within an approximately 80-acre fenced area bordered by Kamm Avenue to the north and agricultural fields to the south, east and west. Two process water settling and cleaning ponds, each with 50 acre-feet of storage capacity, would be located along the southern border of the site and would be connected to the processing plant via an underground pipeline. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local pistachio growers for irrigation.

Major components of the Project would include:

- A 130,000 square foot processing and packing building (approximately 47-feet in height) with appurtenant equipment. A variance is requested to allow the silos to be built in excess of the 35-foot height limit of the Zone District.
- A 15,000 square foot cold storage building.
- Forty-nine (49) storage silos with a base diameter of 48 feet and a height of approximately 65 feet with appurtenant scaffolding and access equipment. A variance is requested to allow the silos to be built in excess of the 35-foot height limit of the Zone District.
- A 21,600 square foot huller canopy and related equipment.
- Thirteen (13) natural gas fired column dryers, each with a 27 million British thermal unit per hour capacity.
- A 353,000 gallon process water storage tank and a 70,000 domestic water storage tank.
- An onsite domestic water treatment facility, including a facility control room and domestic water treatment filers.
- Access roads, scales, signage and related facilities for harvest and shipping truck loading and unloading and employee and other vehicular access and parking facilities.
- Other necessary infrastructure for Project operations and maintenance, including a shop building, a chemical storage warehouse, a fire pumphouse, a motor control center, a compressor building, an administration office building, breakroom and supervisor office building, guard shacks, sand and media raw water filters and process water separators and screens.

Refer to Chapter Two – Project Description for the full description of the Project.

Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the Project objectives:

- To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.
- To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.
- To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.
- To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.
- To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.

Summary of Environmental Impacts

The NOP determined that there could be potential impacts from the following CEQA Guidelines Appendix G topics: Aesthetics, Agriculture/Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The EIR also evaluates Project alternatives as well as cumulative impacts. To support the analysis in the EIR, the following technical studies were prepared: Air Quality / Greenhouse Gases / Energy Study, Biological Resources Report, Cultural Resources Report, Noise Assessment, Soils Study, Traffic Impact Study, and a Water Supply Analysis / Water Quality Study. The environmental baseline for the CEQA analysis is June 1, 2019, which is prior to the development of existing improvements on the site.

As described in Chapter 3, it was determined that all impacts were either less than significant, or could be mitigated to a less than significant level. Mitigation measures are listed in Table ES-1, Mitigation Monitoring and Reporting Program.

Summary of Project Alternatives

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed Project that could feasibly attain most of the objectives of the proposed Project. This EIR analyzed the following alternatives:

- No Project Alternative
- Alternate Site
- Reduced (50%) Project

See Chapter 4 – Alternatives for a full description of potential environmental impacts associated with each alternative.

Mitigation Monitoring and Reporting Program

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved Project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental mitigation during Project implementation and operation. Since there are potentially significant impacts requiring mitigation associated with the Project, a Mitigation Monitoring Program will be included in the Project's Final EIR and is included herein on the following pages.

For purposes of the mitigation measures and conditions of approval, the terms "developer", "proponent", "owner", "applicant", and "operator", shall be interchangeable between the parties as they shall share responsibility for effecting the mitigation measures, conditions of approval, and operational requirements and restrictions.

Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	***Verification of Compliance***		
					Initials	**Date**	***Remarks***
Aesthetics							
AES-1	All outdoor lighting shall be hooded, directed downward, and permanently maintained to not shine towards adjacent properties and roads.	Prior to issuance of building permit	Verification by County of Fresno of incorporation of project design features subject to issuance of building permits	County of Fresno			
Air Quality							
AIR-1	Prior to commencing construction activities, the Project shall prepare a Dust Control Plan as required by San Joaquin Valley Air Pollution Control District (District) Rule 8021 to control fugitive dust sufficiently to limit visible dust emissions to 20 percent opacity during construction, excavation, or earthmoving activities.	Prior to issuance of grading permits and prior to / during construction	Verification by County of Fresno and Construction Contractor	County of Fresno and Construction Contractor			

AIR-2	Prior to installing equipment requiring a District permit to operate, the applicant shall file an Authority to Construct application with the District that complies with the requirements of Rule 2201 New and Modified Stationary Source Review. Emissions of any criteria pollutant that exceed the District offset thresholds after the implementation of best available control technology (BACT) shall provide emission offsets in amounts required by the rule.	Prior to issuance of permit to operate	Verification by County of Fresno and Construction Contractor	County of Fresno and Construction Contractor			
Biological Resources							
BIO - 1	<u>Avoidance of Blunt-nosed Leopard Lizard and Coast Horned Lizard.</u> If Natural Gas Service Line Route C is used to extend natural gas service to the Project site, a protocol-level survey for blunt-nosed leopard lizard shall be conducted in the western most portion of the route where the route is adjacent to grassland habitat. Surveys shall follow the 2019 CDFW Approved Survey Methodology for the Blunt-nosed Leopard Lizard. If blunt-nosed leopard or coast horned lizard is documented during the	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	County of Fresno			

	protocol-level surveys within the area of Project disturbance, species occurrences will be mapped using Geographic Information Systems (GIS) and the designated biologists will conduct on-site monitoring to assure no impacts to this species.						
BIO - 2	<u>Avoidance of San Joaquin Coachwhip and San Joaquin Glossy Snake.</u> If Natural Gas Service Line Route C is used to extend natural gas service to the Project site, a pre-activity survey of annual grassland habitat within 500 feet of the western most position of the pipeline shall be conducted within 14 days of the start of Project activities. The survey shall be conducted by a qualified biologist knowledgeable in the identification of this species. Transects shall be spaced at no greater than 30-foot intervals to obtain a 100 percent coverage of the development footprint and 500-foot buffer. If no evidence of the San Joaquin coachwhip or California glossy snake is detected, no further action is required. If San Joaquin coachwhip or California glossy snake is	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	County of Fresno			

	documented during the pre-activity survey, the species occurrences will be mapped using GIS and a qualified biologist will conduct on-site monitoring to ensure the species is avoided and there are no impacts to this species.						
BIO - 3	<u>Avoidance of Western Burrowing Owl, American Badger, and the San Joaquin Kit Fox</u> The following avoidance and minimization measures shall be implemented during all phases of Project construction to reduce the potential for construction activities to impact the burrowing owl, American badger, and the San Joaquin kit fox. This measure is based upon standard avoidance and minimization measures from the U.S. Fish and Wildlife Service 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. • Project construction-related vehicles shall observe a daytime speed limit of 20-mph throughout the site in all Project	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	County of Fresno			

	areas, except on County roads and State and federal highways. • All Project construction activities shall occur during daylight hours, but if work must be conducted at night then a night-time construction speed limit of 10-mph shall be established. • Off-road traffic outside of designated Project areas shall be prohibited. • To prevent inadvertent entrapment of kit foxes or other animals during construction of the Project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of						

	earthen-fill or wooden planks shall be installed. • Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted before proceeding with the work. • In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS and CDFW shall be contacted for guidance. • All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes and burrowing owls before the pipe is subsequently						

	buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. • All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project site. • No pets, such as dogs or cats, shall be permitted on the Project site.						

	• Project-related use of rodenticides and herbicides shall be restricted. • A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the USFWS and CDFW. • Upon completion of the Project, all areas subject to temporary ground disturbances (including storage and staging areas, temporary roads, pipeline corridors, etc.) shall be recontoured if necessary, and revegetated to promote restoration of the area to pre-						

	Project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but after Project completion will not be subject to further disturbance and has the potential to be revegetated. • Any Project personnel who are responsible for inadvertently killing or injuring one of these species shall immediately report the incident to their representative. This representative shall contact the CDFW (and USFWS in the case of San Joaquin kit fox) immediately in the case of a dead, injured, or entrapped San Joaquin kit fox, American badger, or western burrowing owl. • The Sacramento Fish and Wildlife office and CDFW Region 4 office shall be notified in writing within three working days of the accidental death or						

	injury to a San Joaquin kit fox during Project related activities. The CDFW shall be notified in the case of accidental death to an American badger or western burrowing owl. Notification shall include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. • New sightings of San Joaquin kit fox, American badger, or western burrowing owl shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where a San Joaquin kit fox was observed shall also be provided to the USFWS.						
BIO – 4	<u>Avoidance of Swainson's Hawk</u> If Project construction activities must occur during the Swainson's hawk nesting season (February 15 to August 31), pre-activity surveys shall	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of	County of Fresno			

	be conducted for Swainson's hawk nests in accordance with the 2000 Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. The surveys shall be conducted on and within 0.5-mile buffer of the Project. To meet the minimum level of protection for the species, surveys shall be conducted during at least two survey periods. If an active Swainson's hawk nest is discovered at any time within 0.5-mile of active construction, a qualified biologist shall complete an assessment of the potential for specific construction activities to impact the nest. The assessment would consider the type of construction activities, the location of construction relative to the nest, the visibility of construction activities from the nest location, and other existing disturbances in the area that are not related to construction activities of this Project. Based on this assessment, the biologist will determine if construction activities can proceed and the level of nest monitoring required. Construction		Findings, if applicable.				

	activities shall not occur within 500 feet of an active nest but depending upon conditions at the site this distance may be reduced. Full-time monitoring to evaluate the effects of construction activities on nesting Swainson's hawks may be required. The qualified biologist shall have the authority to stop work if it is determined that Project construction is disturbing the nest. These buffers may need to increase depending on the sensitivity of the nesting Swainson's hawk to disturbances and at the discretion of the qualified biologist. If the biologist determines that construction cannot occur without risk of take of the species, then a State Incidental Take Permit (ITP) would need to be obtained prior to initiation of work activities.						
BIO – 5	<u>Avoidance of San Joaquin Antelope Squirrel</u> If Natural Gas Service Line Route C is used to extend natural gas service to the Project, a pre-activity survey of the adjacent annual grassland habitat shall be conducted within 14 days of	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	County of Fresno			

	the start of Project activities by a qualified biologist knowledgeable in the identification of this species. Transects shall be spaced at no greater than 30-foot intervals to obtain a 100 percent coverage of the development footprint and 500-foot buffer. The surveys shall be conducted during appropriate time and temperature constraints (April 1 to September 30 and 68 to 86 degrees F), If no evidence of the San Joaquin antelope squirrel is detected, no further action is required. If San Joaquin antelope squirrel is observed during the pre-activity survey, the species occurrences will be mapped using GIS and a qualified biologist will conduct on-site monitoring during construction activities. The biologist shall have the authority to temporarily stop activities so that impacts to this species can be avoided.						
BIO – 6	<u>Pre-activity Surveys for Nesting Migratory Birds and Raptors</u> If Project construction activities must occur during the nesting season	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal	County of Fresno			

	(February 1 to September 15), pre-activity nesting bird surveys shall be conducted within seven days prior to the start of construction at any specific construction area. The construction site plus a 250-foot buffer for songbirds and a 500-foot buffer for raptors (other than Swainson's hawk) shall be included in the survey. Multiple surveys, conducted at approximately 30-day intervals, are likely to be needed based upon the extended construction period of the Project construction activities and extensive habitat for nesting birds that occurs on the Project. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a		of Report of Findings, if applicable.				

	qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring or routine monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.						
BIO – 7	<u>Avoidance and Minimization Measures for Bats</u> A pre-activity survey for bats shall be conducted at the plant processing site within 14 days prior to the start of construction activities. If sign of day roosting bats is identified at any of the existing outbuildings during the pre-activity survey, a follow up flyout examination of the potential roost shall be conducted at dusk. If rooting bats are found to be present, then acoustical sampling shall be conducted to determine species. If day roosting bats are determined to be present, bats would be excluded	Prior to issuance of grading permits	Various Actions: Retention of professional biologist/submittal of Report of Findings, if applicable.	County of Fresno			

	from the roosting site by installing exclusion devices. Exclusion devices would only be installed at night while bats are away from the roost. If the day roosting bats are identified as special-status species, then an exclusion plan shall be prepared and approved by CDFW prior to initiating bat exclusions. If a maternity colony is present, then construction activities will be delayed until the colony has dispersed.						
Cultural Resources							
CUL – 1	Should any potentially significant cultural, historical, archaeological or fossil resources be discovered, no further ground disturbance shall occur in the area of the discovery until the Planning Director concurs in writing that adequate provisions are in place to protect these resources. Unanticipated discoveries shall be evaluated for significance by a certified professional archaeologist or paleontologist that meets the Secretary of the Interior's Professional Qualifications	Prior to and during construction	Monitoring by construction contractor	Construction contractor / County of Fresno			

	Standards. If significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; curate materials with recognized scientific or educational repository; and provide a comprehensive final report as required by Senate Bill 18; California Historical Building Code (Title 24, Part 8); California Public Resources Code Sections 5020-5029.5, 5079-5079.65, 5097.9-5097.998, and 5097.98; and California State Health and Safety Code, Section 7050.5, as applicable.						
CUL – 2	A qualified archaeological monitor shall be present during ground disturbance activities associated with installation of the Project's proposed high pressure gas route (either Option A or Option B) within the Arroyo Ciervo flood plain located within the southern half of Section 23 in Township 16S, Range 14E of the Mount Diablo Meridian.	Prior to and during construction	Monitoring by construction contractor	Construction contractor / County of Fresno			

Geology and Soils							
GEO – 1	In order to reduce on-site erosion due to project construction and operation, an erosion control plan and Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for the site preparation, construction, and post-construction periods by a registered civil engineer or certified professional. The erosion control plan shall incorporate best management practices consistent with the requirements of the National Pollution Discharge Elimination System (NPDES). The erosion component of the plan must at least meet the requirements of the SWPPP required by the Central Valley RWQCB. If earth disturbing activities are proposed between October 15 and April 15, these activities shall be limited to the extent feasible to minimize potential erosion related impacts. Additional erosion control measures shall be implemented in consultation with the County of Fresno. Prior to the issuance of any permit, the project proponent shall submit detailed plans to the satisfaction of the	Prior to issuance of grading permits	Verification by County of Fresno and Construction Contractor	Construction contractor and County of Fresno			

	County of Fresno. The components of the erosion control plan and SWPPP shall be monitored for effectiveness by County of Fresno. Erosion control measures may include, but not be limited to, the following: **i.** Limit disturbance of soils and vegetation disturbance removal to the minimum area necessary for access and construction; **ii.** Confine all vehicular traffic associated with construction to the right-of-way of designated access roads; **iii.** Adhere to construction schedules designed to avoid periods of heavy precipitation or high winds; **iv.** Ensure that all exposed soil is provided with temporary drainage and soil protection when construction activity is shut down during the winter periods; and **v.** Inform construction personnel prior to construction and						

	periodically during construction activities of environmental concerns, pertinent laws and regulations, and elements of the proposed erosion control measures.						
Hydrology / Water Quality							
HYD - 1	Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the Central Valley RWQCB has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers,	Prior to issuance of grading permits	SWPPP and General Permit for Stormwater Discharge	Project Operator / County of Fresno / Central Valley RWQCB			

	binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by County of Fresno and the Central Valley RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the Central Valley RWQCB.						
HYD - 2	Discharge to the settling ponds shall not exceed the more restrictive of: (1) a maximum daily flow of 1.62 mgd, an average daily flow for the season of 1.4 mgd, or an annual flow for the season of 58.8 million gallons; or (2) flow limits in the Project WDRs issued by the Central Valley RWQCB.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB Central Valley RWQCB			
HYD - 3	The cycle average BOD loading rate to the land application areas shall not	Ongoing	Verification by Project Operator /	Project Operator /			

	exceed the more restrictive of (1) 100 lbs/acre/day; or (2) BOD loading rates in the Project WDRs issued by the Central Valley RWQCB.		County of Fresno / Central Valley RWQCB	County of Fresno / Central Valley RWQCB			
HYD – 4	Hydraulic loading of irrigation reuse water and other irrigation water shall not exceed the more restrictive of: (1) reasonable agronomic rates designed to minimize the percolation of wastewater and irrigation water below the root zone (i.e., deep percolation) or (2) hydraulic loading rates in the Project WDRs issued by the Central Valley RWQCB.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			
HYD – 5	Application of waste constituents in irrigation reuse water shall not exceed the more restrictive of: (1) reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management, and the annual nutritive loading to the land application areas, including the nutritive value of organic and chemical fertilizers and of the wastewater, shall not exceed the annual crop demand, except for potassium; or (2) nutritive	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			

	constituent loading rates in the Project WDRs issued by the Central Valley RWQCB.						
HYD – 6	Irrigation with irrigation reuse water shall not be performed within the more restrictive of: (1) 24 hours of a storm event of measurable precipitation or when soils become saturated; (2) storm event and soil saturation limits in the Project WDRs issued by the Central Valley RWQCB.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			
HYD – 7	Within 180 days of the issuance of the Project WDRs by the Regional Board the Project shall submit for Central Valley RWQCB approval and implement the more restrictive of: (1) a Wastewater and Nutrient Management Plan with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or nuisance conditions, calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, and commercial fertilizers are applied at agronomic	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			

	rates, except for potassium; or (2) a Wastewater and Nutrient Management Plan specified in the Project WDRs issued by the Central Valley RWQCB.						
HYD – 8	Within 180 days of the issuance of the Project WDRs by the Regional Board the Project shall submit for Regional Board approval and implement in accordance with such approval the more restrictive of: (1) a Salinity Control Plan that incorporates current best practices that have been implemented in other pistachio processing plants in the region, such as in the Salinity Control Plan prepared in 2019 under WDR Order No. R5-2018-0005, to further reduce the salinity of the discharge to the maximum extent feasible, including an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan; or (2) a Salinity Control Plan as specified in	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			

	the Project WDRs issued by the Central Valley RWQCB.						
HYD – 9	No pistachio processing solids generated by the Project shall be applied in 100-year flood hazard zones mapped by the Federal Emergency Management Agency within the 160-acre solids materials management site or within the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			
HYD – 10	Pistachio processing solids generated by the Project shall be managed by the more restrictive of: (1) even application and incorporation into the soil within the applicable portions of the 160-acre solids materials management site and the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds as needed, to prevent odors and nuisance conditions; or (2) in accordance with solid management requirements specified in the Project WDRs issued by the Central Valley RWQCB.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			

HYD – 11	Soil samples at each location where solids generated during the pistachio season have been applied and incorporated into the soil shall be taken, analyzed for constituents of concern and reported to the Central Valley RWQCB by the more restrictive of: (1) once per year (2) in accordance with the sampling and reporting requirements in the Project WDRs issued by the Central Valley RWQCB.	Ongoing	Verification by Project Operator / County of Fresno / Central Valley RWQCB	Project Operator / County of Fresno / Central Valley RWQCB			
HYD -12	Any unknown water wells or septic systems that may be discovered during construction activities shall be properly destroyed by an appropriately licensed contractor in compliance with the Fresno County Department of Public Health, Water Surveillance Program.	During construction	Verification by Project Operator / County of Fresno	Project Operator / County of Fresno			
Noise							
NOI – 1	All construction equipment shall be equipped with noise control devices (e.g. mufflers) in accordance with manufacturers' specifications. Construction equipment shall be periodically inspected to ensure proper maintenance and presence of noise control devices (e.g.	Prior to issuance of grading permits	Verification by Construction Contractor / County of Fresno	Construction contractor / County of Fresno			

	lubrication, mufflers that do not leak, and shrouding).						
NOI - 2	All operational equipment shall be maintained according to manufacturers' specifications and all noise-generating operational equipment shall be equipped with mufflers.	Prior to operation	Verification by Project Operator / County of Fresno	Project Operator / County of Fresno			
Transportation / Traffic							
TRA - 1	The Project Applicant shall implement a carpool/vanpool/rideshare program and establish and maintain at least a 23 percent employee participation to reduce VMT by more than 15% below the existing average of 41.67 VMT for the proposed Project.	Prior to operation	Verification by Project Operator / County of Fresno	Project Operator / County of Fresno			

Chapter 1

INTRODUCTION

Chapter One - Introduction

This Environmental Impact Report (EIR or Draft EIR) has been prepared on behalf of the County of Fresno (County) in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR for the proposed Project. The Kamm Avenue Pistachio Processing Plant (KAPP) is proposed by Kamm Avenue Pistachio Processing, LLC (Applicant). The Applicant has applied to the Fresno County Department of Public Works and Planning for Classified Conditional Use Permit Application No. 3685, a height variance (Variance Application No. 4085), and early termination of certain agricultural land conservation contracts (Williamson Act Contracts) to construct, operate, and maintain a pistachio processing plant with the capacity to process 60 million pounds of finished pistachio products per year (Project). The Project would provide pistachio processing capacity in the immediate vicinity of existing pistachio orchards that currently ship harvested crops for processing to more remote locations, including plants outside of the County. The proposed Project is more fully described in Chapter Two – Project Description.

An EIR responds to the requirements of CEQA as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. The Planning Commission and Board of Supervisors will use the EIR during the public review process in order to understand and evaluate the potential environmental implications associated with implementing the proposed Project.

1.1 Purpose of the EIR

The County of Fresno, as Lead Agency, determined that the proposed activities constitute a "project" within the definition of CEQA. The preparation of an EIR is required by CEQA prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the proposed Project. The Draft EIR also discusses alternatives to the Project, and proposes mitigation measures that will offset, minimize, or otherwise avoid significant environmental impacts. This Draft EIR has been prepared in accordance with CEQA, California Resources Code Section 21000 et seq.; the Guidelines for the California Environmental Quality Act (California Code of Regulations, Title

14, Chapter 3); and the rules, regulations, and procedures for implementing CEQA as adopted by the County of Fresno.

An EIR must disclose the expected direct and indirect environmental impacts associated with a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development.

1.2 Type of EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR pursuant to CEQA Guidelines Section 15161. A project-level EIR is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation. The project-level analysis considers the broad environmental effects of a proposed project.

1.3 Intended Uses of the EIR

The County of Fresno, as the Lead Agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the proposed Project. This EIR may also be used

by other agencies within Fresno County, such as the Air District, which may use this EIR during the permitting process.

1.4 Known Responsible and Trustee Agencies

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The Project may require permits and approvals from Trustee and Responsible Agencies, which may include the following:

- An Authority to Construct and Permit to Operate issued by the San Joaquin Valley Air Pollution Control District;
- Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board; and
- Drinking water source assessment and other applicable domestic water system approvals issued by the State Water Resources Control Board.

1.5 Environmental Review Process

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

Notice of Preparation

The County of Fresno circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on Septebmer 14, 2020 to trustee and responsible agencies, the State Clearinghouse (SCH #2020090207), and the public. To allow for additional NOP review, a second NOP was issued on October 2, 2020 for a 30-day public review period ending on November 2, 2020. Scoping meetings were held on September 28, 2020 and on October 19, 2020. No NOP comment letters were received by Fresno County.

Draft EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the Project, description of the environmental setting, identification of the Project's direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, County of Fresno will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

Public Notice/Public Review

Concurrent with the NOC, the County of Fresno will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is fortyfive (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

David Randall, Senior Planner
County of Fresno – Department of Public Works and Planning
2220 Tulare Street, 6th Floor
Fresno, CA 93721
(559) 600-4540
drandall@fresnocountyca.gov

Responses to Comments/Final EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments during such review period.

Certification of the FInal EIR/Project Consideration

The County of Fresno Board of Supervisors (Board) will review and consider the Final EIR. If the Board finds that the Final EIR is "adequate and complete," the Board may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed Project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the Board may take action to approve, revise, or reject the Project. A decision to approve the proposed Project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 1509 and a statement of overriding consideration made in accordance with State CEQA Guidelines Section 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.6 Organization and Scope

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the Project, environmental and planning documentation prepared for recent projects located within the County of Fresno, and responses to the Notice of Preparation (NOP). This Draft EIR is organized in the following manner:

Executive Summary

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's

environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

Chapter 1.0 – Introducation

Chapter 1.0 briefly describes the proposed project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received on the NOP.

Chapter 2.0 – Project Description

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

Chapter 3.0 – Environmental Setting, Impacts and Mitigation Measures

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area. Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact. Cumulative impacts are also discussed in each environmental topic subsection. Cumulative impacts can result from the proposed project alone, or together with other projects. A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increase other overall environmental impacts.

The following environmental topics are addressed in this Draft EIR:

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

Chapter 4.0 – Project Alternatives

Chapter 4.0 provides a comparative analysis between the merits of the proposed project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

Chapter 5.0 – Other CEQA-Required Topics

Chapter 5.0 evaluates and describes the following CEQA required topics: growth-inducing effects, significant and irreversible effects, significant and unavoidable impacts, substantial adverse effects on protected fish, wildlife, and plant species, substantial adverse effects on human beings, and effects not found to be significant.

Chapter 6.0 – Report Preparers

Chapter 6.0 lists all authors and agencies that assisted in the preparation of the Draft EIR, by name, title, and company or agency affiliation.

Appendices

This section includes the NOP (and comment letters to the NOP) in addition to the technical studies prepared for the proposed Project.

Chapter 2

PROJECT DESCRIPTION

Chapter Two - Project Description

Introduction

The Kamm Avenue Pistachio Processing Plant (KAPP) is proposed by Kamm Avenue Pistachio Processing, LLC (Applicant). The Applicant has applied to the Fresno County Department of Public Works and Planning (County) for Classified Conditional Use Permit Application No. 3685, a height variance (Variance Application No. 4085), and early termination of certain agricultural land conservation contracts (Williamson Act Contracts) to construct, operate, and maintain a pistachio processing plant with the capacity to process 60 million pounds of finished pistachio products per year (Project). The Project would provide pistachio processing capacity in the immediate vicinity of existing pistachio orchards that currently ship harvested crops for processing to more remote locations, including plants outside of the County. Refer to Section 2.2 for the full Project description.

2.1 Project Location and Setting

The proposed Project site is located on the Central Valley floor in western unincorporated Fresno County, California, between the California Aqueduct and Interstate 5 (I-5). The unincorporated community of Three Rocks, a U.S. Census designated place with a population of approximately 250, is located approximately 1.5 miles to the south of the KAPP facility's primary pistachio hulling and processing equipment. The nearest major roadway intersection is West Kamm Avenue and State Route 33, approximately one mile to the east. I-5 is located approximately 2.5 miles to the southwest on the eastern edge of the Diablo Range foothills. The California Aqueduct is located approximately 1 mile to the northeast. The general latitude and longitude for the Project site is 36.523532° and -120.411545°. The Project is in the Levis, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle. Refer to Figures 2-1 and 2-2.

The proposed Project will be built on portions of parcels with Assessor's Parcel Numbers (APN) 038-300-17S (a 155.8-acre parcel) and 038-300-30S (a 160-acre parcel), (See Figure 2-3). The 80-acre main processing plant will be located on the northern half of APN 038-300-17S. Access roads, an underground process water conveyance pipeline, and two lined process water settling and cleaning ponds with appurtenant dewatering and pumping equipment will be located on portions of the southern half of APN 038-300-17S and APN 038-300-30S. Approximately 134.6 acres of the combined 315.8-acre parcels would be used for the Project.

The Project site is designated as Agricultural in the Fresno County General Plan and zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) (See Figure 2-4). The site is located in the Westlands Water District. The Project parcels are owned by Ventana South and were acquired in 2011. The parcels have not been used for commercial agricultural purposes since they were acquired. Historical records indicate that that the northern parcel, APN 038-300-17S, has not been used for agriculture since at least 2009. The southern parcel, APN 038-300-30S, has not been used for agriculture since 2006. Neither parcel contains soil identified as prime, statewide important, or unique farmland by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). The current FMMP map for Fresno County identifies the Project site as farmland of local importance, which includes all farmable lands within the County that do not meet the definitions of prime, statewide, or unique and land that is or has been used for irrigated pasture, dryland farming, confined livestock and dairy, poultry facilities, aquaculture and grazing. APN 038-300-17S and the western 80 acres of APN 038-300-30S are subject to existing Williamson Act Contract No. 365. The eastern 80 acres of APN 038-300-30S are subject to existing Williamson Act Contract No. 1839. Notices of nonrenewal were filed with the County for the portions of these Williamson Act contracts applicable to the Project site on September 20, 2019.

In late 2019, grading, excavation, foundation installation, crushed asphalt deposition and the placement of two storage silos and other structures occurred, primarily within the northern 80 acres of APN 038-300-17S. These activities were halted, pending this CEQA review. Thus, the environmental baseline for evaluating potential Project impacts is June 1, 2019, which is prior to the development of existing improvements on the site. The Project site is otherwise characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. No shrubs, trees or jurisdictional wetlands or waters are located on the Project site.

Existing land uses surrounding the Project site consist of agricultural land, including nearby pistachio orchards owned and operated by affiliated entities that would be served by the proposed processing facilities. The FMMP map for the County identifies areas to the north, east and west as prime agricultural land, most of which is planted with pistachio trees. A water pipeline extends from an existing turnout in the Aqueduct along the eastern border of the site. A metered connection will be installed on the pipeline to provide water for the Project. Residential and related commercial land uses are located in Three Rocks, approximately 1.5 miles southeast of the main KAPP processing facilities. An existing electrical power line extends from the Giffen Substation operated by PG&E to the east of the Project area along the north side of Kamm Avenue at the northern border of the site.

Figure 2-1
Regional Aerial Map

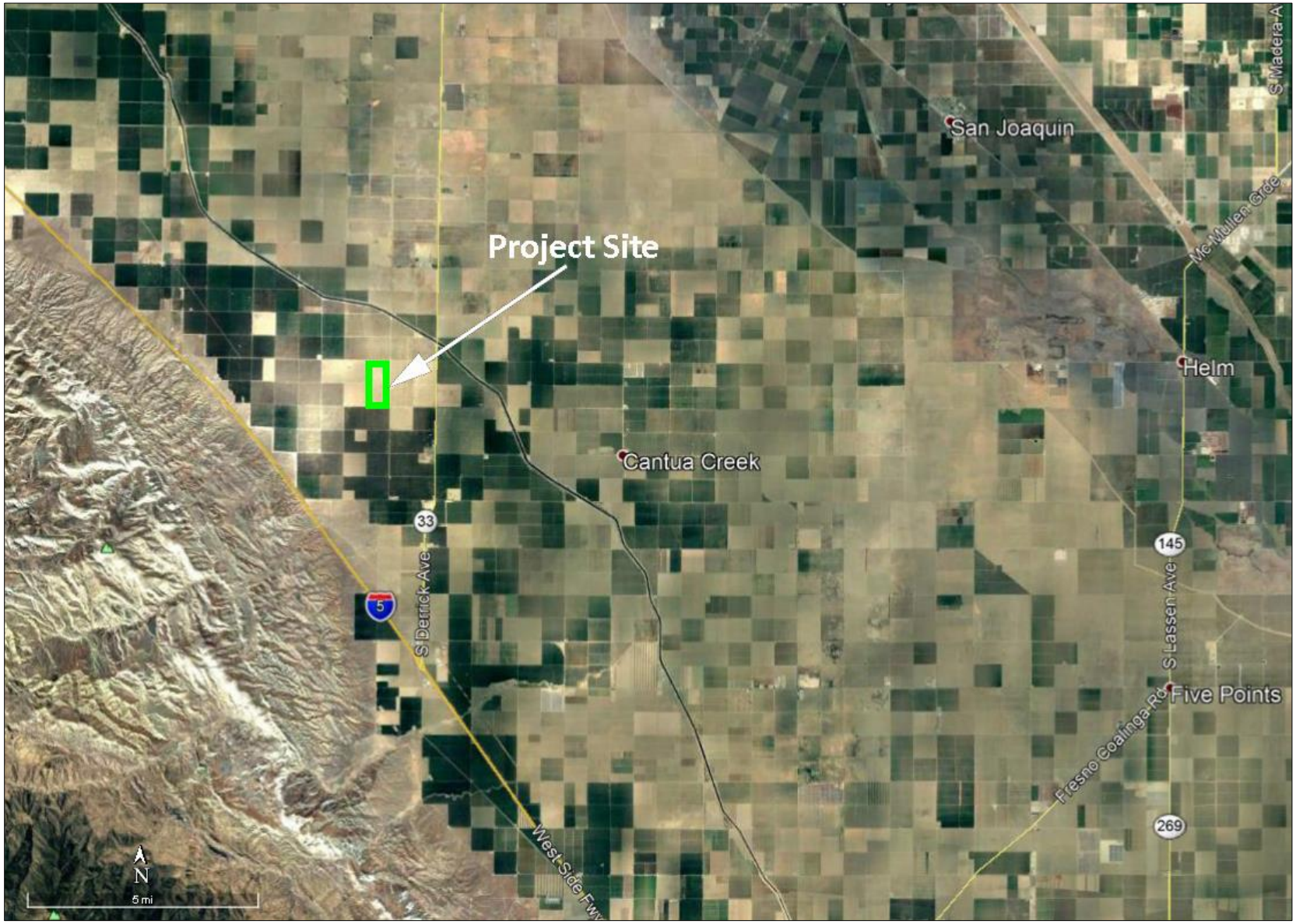


Figure 2-2
Site Aerial Map

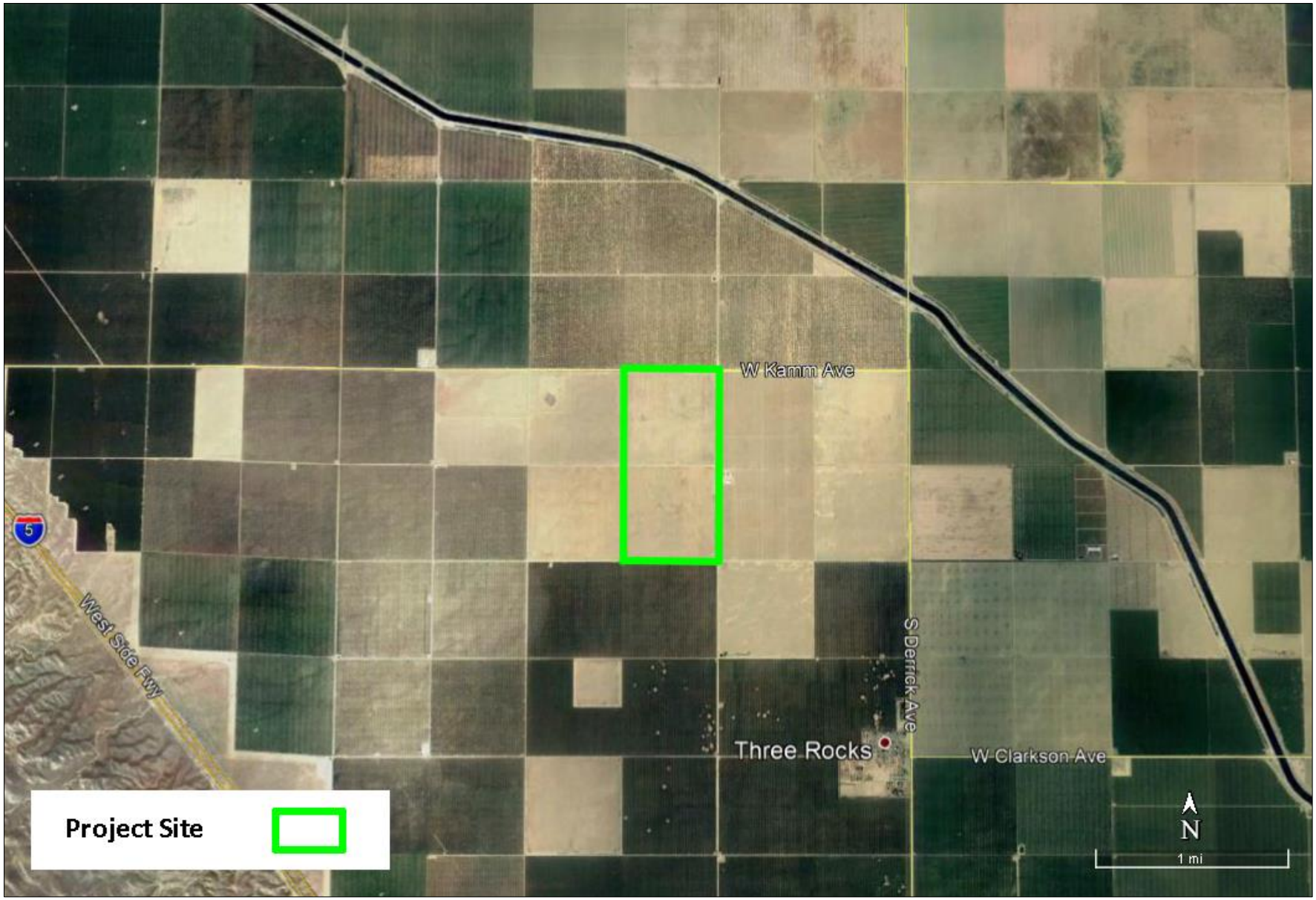


Figure 2-3
Location Map

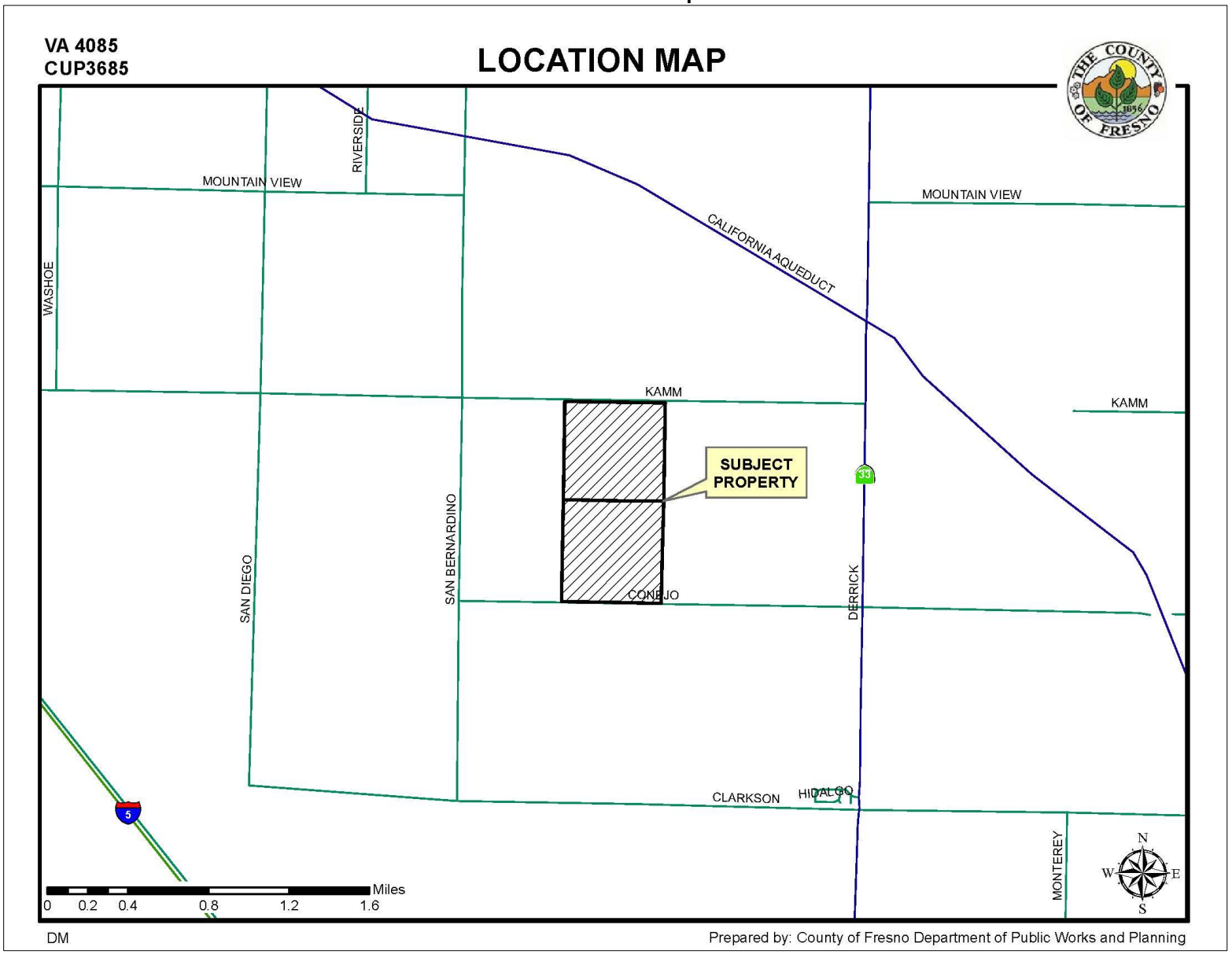
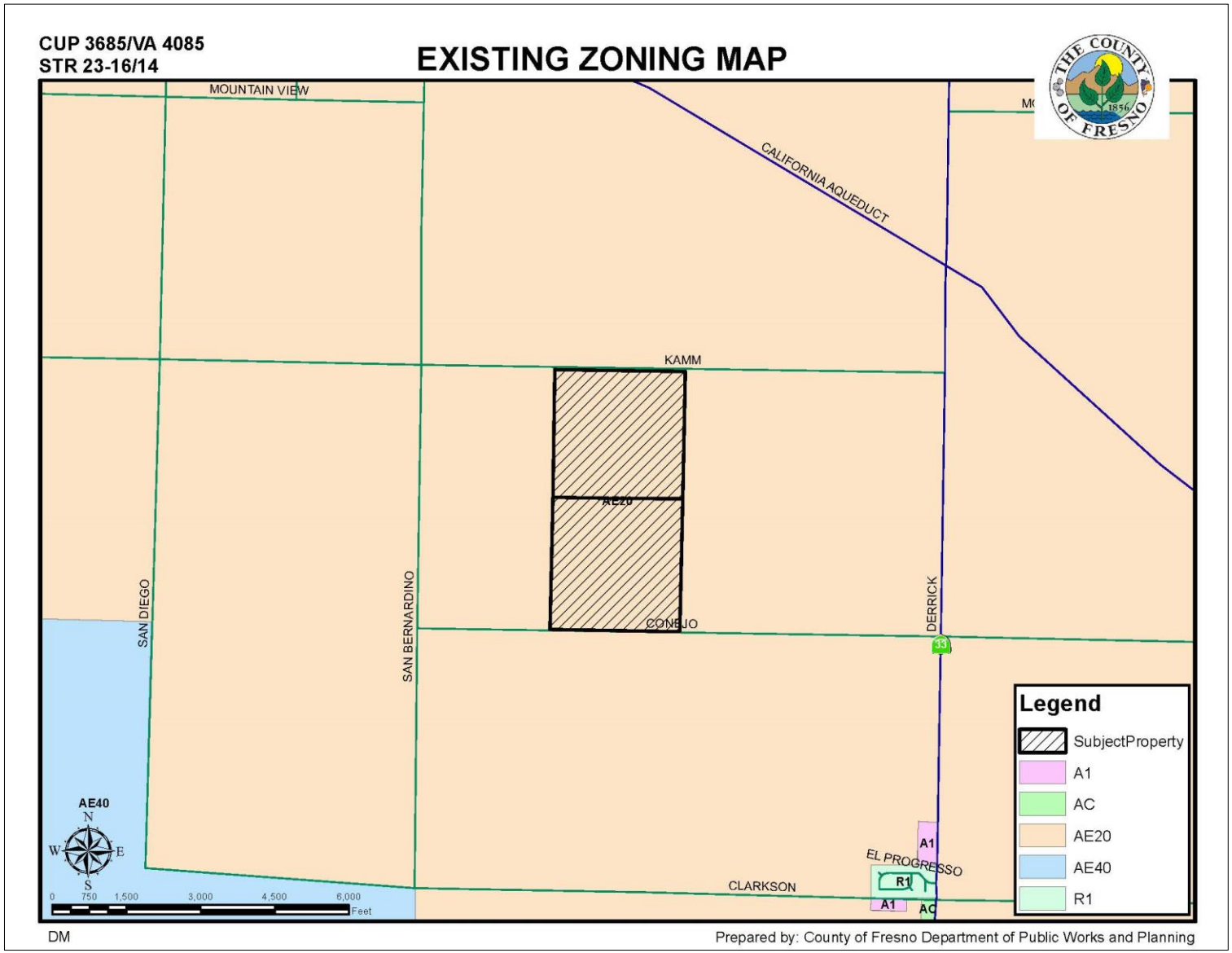


Figure 2-4
Fresno County Zoning Map



2.2 Project Description

The Project Applicant is proposing to operate the Project year-round to package and process harvested pistachios for retail and wholesale customers. The proposed pistachio processing plant will have the capacity to hull, store, and prepare for marketing up to 60 million pounds of finished pistachio product per year.

During an approximately 6-week harvest period, which typically occurs during August to October, the Project will operate seven days a week and 24 hours per day to receive, hull, heat, dry and store pistachio crops in onsite storage silos. During non-harvest operations, the Project will operate two shifts per day five or six days per week depending on pistachio product market conditions. The Project will have a full-time workforce of 60 employees. An additional 60 workers will be employed during the 6-week harvest period. The primary pistachio processing facilities will be located within an approximately 80-acre fenced area adjacent to Kamm Avenue to the north. Two process water settling and cleaning ponds, each with 50 acre-feet storage capacity, will be located along the southern border of the site and will be connected to the processing plant via an underground pipeline.

Facility management, administrative and employee buildings and parking will be constructed adjacent to the finished product processing building. These buildings will include office space, meeting rooms, employee personal storage, safety equipment, breakrooms and similar facilities, including restrooms.

Other buildings required for facility operation include a motor control center, shop building, storage warehouse and air compressor building. The motor control center will house all electrical components in a controlled, properly ventilated environment. The air compressor building will house air compression equipment used in the processing plant and for other compressed air demands in a controlled, properly ventilated location. The storage warehouse will be used to store used outside of the processing building in the facility.

To meet applicable food safety standards, a 100-foot by 500-foot fumigation operations area will be maintained in the Project area. Access to the fumigation area will be strictly controlled and fumigants will be stored and utilized in accordance with all applicable laws and regulations. Other chemicals used in the plant facility include various equipment cleaners, chlorination for water treatment and disinfection, equipment fuel and lubricants, and pest controls. All potentially hazardous materials stored onsite would be locked in locations with limited access for qualified employees and will be stored and used in compliance with all applicable laws and regulations,

including the requirements of the Fresno County Environmental Health Division. Material Safety Data Sheets for all applicable onsite materials would be available to onsite personnel.

The Project will include facilities identified in the bulleted list below:

- One (1) 130,000 square foot (sq. ft.) finished product processing and packing building and related equipment
- One (1) 15,000 sq. ft. cold storage building
- One (1) 1,200 sq. ft. motor control center building
- One (1) 1,200 sq. ft. air compressor building
- One (1) 12,156 sq. ft. administrative office building
- One (1) 8,818 sq. ft. breakroom and supervisor office building
- One (1) 1,000 sq. ft. main scale house, guard shack and 80-foot truck scale at the Kamm Avenue access location
- One (1) 200 sq. ft. scale house and 80-foot truck scale at the harvest truck entrance located on the western edge of the site and south of Kamm Avenue
- Forty-nine (49) 48-foot base diameter and 65-foot tall storage silos and appurtenant scaffolding and access equipment
- One (1) 21,600 sq. ft. huller canopy and related equipment, including hullers, a hulling wash and residue capture pit, and a float tank for separating blanks prior to drying
- Thirteen (13) 27 MMbtu per hour natural gas fired column dryers
- One (1) 6,570 sq. ft. shop building with a 2,920 sq. ft. canopy
- Four (4) sand and media raw water filters that will provide primary treatment for all water supplied to the plant prior to storage and use
- One (1) 353,000 gallon water storage tank for storing processing water and to provide initial chlorination of all water used onsite
- One (1) 324 sq. ft. fire pump house
- One (1) 972 sq. ft. storage warehouse for storing chemicals used outside of the processing facility
- One (1) 2,010 sq. ft. domestic water treatment facility
- Three (3) domestic water treatment filters that will treat water drawn from the primary storage tank to meet domestic use standards for periodic onsite equipment cleaning and employee use
- One (1) 40,000 gallon domestic water storage tank to store water treated to domestic use standards for periodic onsite equipment cleaning and employee use
- Three (3) precleaning equipment installations to remove twigs, stems, and similar solid materials from the raw pistachios prior to hulling

- One (1) huller pit to collect hulling process water and equipment washdown water
- Three (3) excavated and cement-lined hulling pits to receive raw pistachios during the harvest period
- One (1) 50,000 sq. ft. fenced fumigation operations area
- One (1) 400 sq. ft. fenced chemical storage area for chemicals used in the processing building
- Connections and metering equipment to supply water from an existing 34-inch diameter pipeline
- Two (2) underground 18-inch diameter pipelines extending from the hulling water and residue capture pit under the hulling canopy to two water settling and cleaning ponds located on the southern border of the Project area
- Two (2) hulling process water and hull residue agitators, separators and screen systems located adjacent to the water settling and cleaning ponds to dewater and extract the hull residue from the process water that will be reused for irrigation
- Two (2) lined 450 sq. ft. process water settling and cleaning ponds, with a combined storage capacity of 32.59 million gallons, or 100 acre-feet, that will remove processing materials and improve water quality prior to the reuse of the process water for irrigation with related pumping equipment
- Paved or improved (e.g., with crushed asphalt or similar pervious materials) primary access and secondary roads, truck turnaround areas, and employee parking facilities
- Five (5) septic systems for employee waste
- One (1) unlined stormwater retention basin with a total capacity of 21 acre-feet and related flow conveyance facilities located in the north east corner of the main Project processing plant site
- Black chain link security fencing 6 feet in height, with access gates, enclosing the entire 80-acre main processing plant on the north of the Project area, the fumigation area, the stormwater basin, and the two processing water settling and cleaning pond facilities on the south of the Project area
- Natural gas connections and metering equipment to be extended to the site by PG&E from an existing distribution system to the west of the Project
- Electrical power connections and metering equipment to be extended to the site by connection to an existing electrical distribution line on the north side of Kamm Avenue

Harvest Period Operations

Harvest period operations will generally route raw pistachios from the eastern side of the processing plant to 49 storage silos extending to the west. In August, September, and October each year, harvest trucks will transport raw pistachios to the facility through an entrance that will be constructed south of Kamm Avenue along the Project's western border. The pistachios will be unloaded from the bottom of the truck trailers into three T-shaped receiving pits located at the east end of the facility. The unhulled pistachios will be conveyed from the receiving pits through precleaning equipment to remove stems, twigs, leaves and other solids. Solid materials extracted by the precleaning process will be conveyed to truck trailers located to the north of the hulling canopy. The precleaned pistachios will be routed to hulling equipment located under the hulling canopy that will remove the soft external hulls from the internal shells. A floater line will be used to separate empty pistachio shells, or "blanks," from the hulled products. Hulled, non-blank pistachios would be then be to gas-fired dryers located to the west of the hulling canopy. Once the drying process is complete, the pistachios would be conveyed to and stored in the onsite storage silos.

Finished Product Operations

Finished products will be processed throughout the year from the onsite stored pistachios. The finishing process will primarily occur in a processing building located to the northwest of the storage silos. Finished processing will include needle sorting (for open and closed in-shell products), electronic sorting (to remove defects and foreign material), hand sorting, packaging, and roasting. Pistachio kernels will be generated through centrifugal type shellers and processed through electronic and hand sorting prior to packaging or roasting. All finished goods orders will be fumigated, typically in the shipping container. Cold storage facilities will include one open room with a temperature of 55-60 degrees to store and protect work in progress products. Finished products will be loaded for shipment on the west side of the processing building, and exit the plant from a weigh station and a guard shack that directly connects with Kamm Avenue on the north side of the Project area.

Project Workforce

The Project would operate year-round. Outside of the 6-week harvest period, the facility would have a full-time workforce of 60 employees working two shifts per day and 5 to 6 days per week depending on demand for pistachio products. During the harvest period, a temporary workforce of 60 employees will also be employed for the duration of the harvest. The Project facilities will

operate 24 hours per day seven days per week during the harvest period. There will be a maximum of 120 employees per day on the site during the harvest (see Table 2-1).

Table 2-1
Full Time and Seasonal Employees

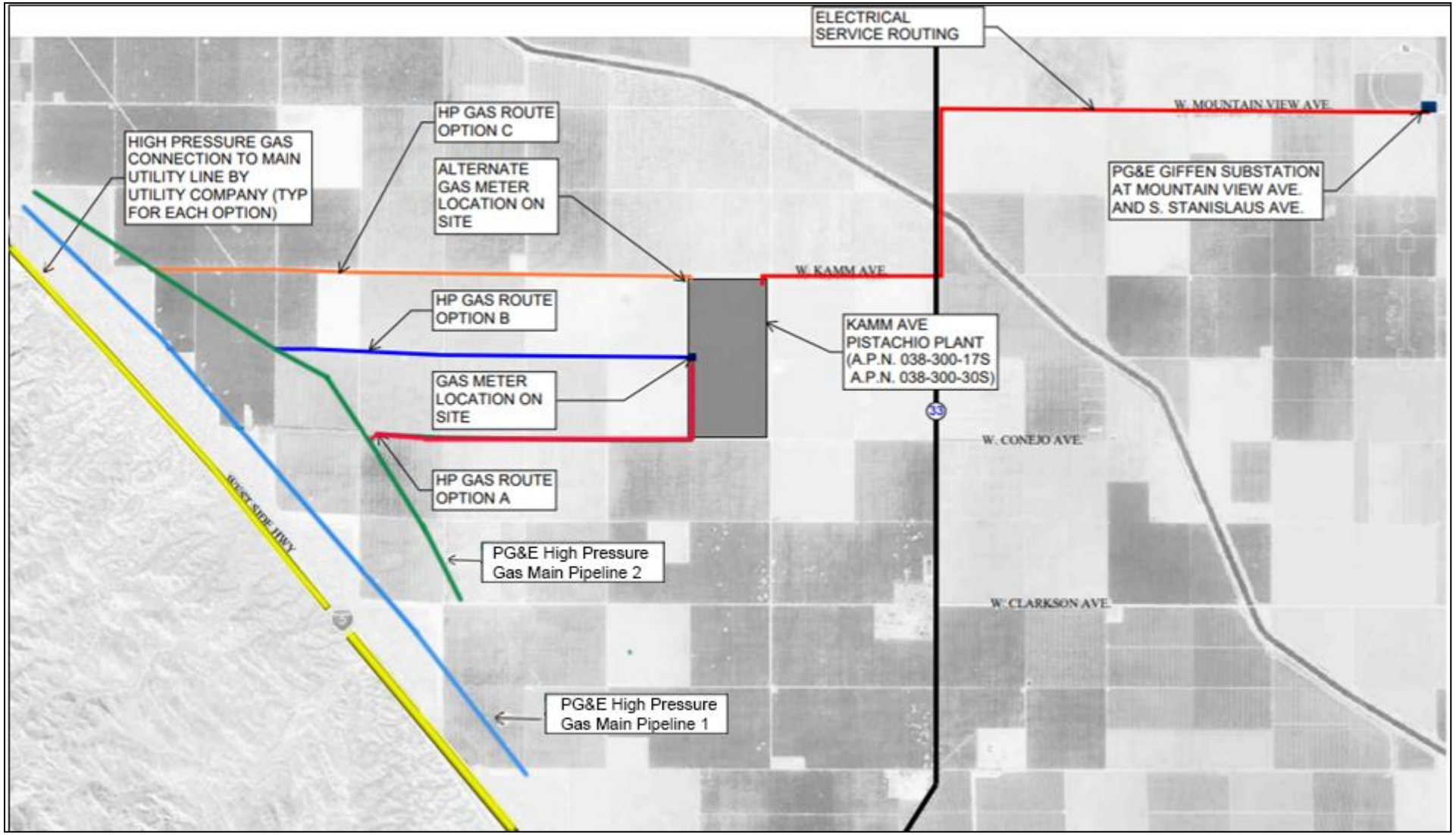
	Full time Employees	Shifts per day	Seasonal Employees	Shifts	Maximum number of daily employees
Non-harvest Operations	30	2	0	0	60
Harvest Period	30	2	30	2	120

Utilities

The Project will be supplied with natural gas and electrical power by PG&E. Natural gas service will be extended by installing a steel pipeline operating at transmission pressure of at least 60 pounds per square inch gauge (psig) from PG&E's existing gas transmission line 300B, approximately 3 miles west of the Project site on land owned by entities affiliated with the Project applicant (see Figure 2-5). Trucks would be used to provide liquified natural gas (LNG) for Project use in the first year of operations.

Electrical power would be provided by connecting with an existing powerline located on the north side of Kamm Avenue near the northern border of the Project site. The power line extends from a PG&E substation (Giffen substation) to the east (see Figure 2-5). The existing PG&E overhead transmission line will be upgraded and voltage regulation equipment will be installed between the Giffen substation and the Project site to meet Project and other anticipated electrical demand in the region. Improvements to the transmission line (shown in Figure 2-5) and the voltage regulation equipment are evaluated in this EIR. To serve the Project, PG&E could potentially transfer electrical power from other substations to the Giffen substation depending on Project-related electrical requirements and other electrical needs in the area. The provision of electrical power for the Project will require minor improvements to the Giffen substation, including installation of a new transformer and related equipment, which are anticipated to disturb less than 1 acre of land within the existing Giffen substation footprint. The Project would contract with commercial electrical power generation providers to provide onsite generation capacity to meet peak electricity demand, including during the harvest period, until the transmission line improvements are completed.

Figure 2-5
Potential Natural Gas Service Alignments from Existing Distribution Line to the Site and Existing Electrical Substation and Transmission Line to the Site



Wastewater/Sewer

A septic system with five septic tanks would be installed in the Project Area to support the restroom facilities and sewage needs of the facility's full-time and seasonal staff and employees.

Water Supply and Projected Water Use Demands

Project water would be supplied by the Westlands Water District (WWD) from existing conveyance facilities that extend from the California Aqueduct to a pipeline traversing the east side of the Project area. The Project will contract with affiliated growers in the vicinity to obtain sufficient water supplies to operate the processing plant during average, dry and multiple year drought conditions. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local pistachio growers for irrigation.

The Project land and pistachio orchards owned and operated by affiliated entities in the vicinity of the Project are within the WWD service area. All of these lands have an annual allocation per acre of surface water imported by WWD through the federal Central Valley Project. WWD surface water used in the Project region is conveyed through turnouts located along the California Aqueduct to distribution pipelines that deliver the water to local distribution facilities for pistachio orchard irrigation. An existing 34-inch water distribution pipeline is located along the eastern border of the site and extends to existing turnout facilities in the Aqueduct. The Project will install connection and metering equipment on the existing pipeline to deliver water supplies necessary to operate the processing plant (see Figure 2-6).

Surface water supplies in California, including the surface water provided to users in the Project region by WWD, are subject to variability due to hydrologic conditions and regulatory requirements. The Project will contract with affiliated entities that have surface water allocations from WWD for 2,556 acres of irrigated land as identified in Figure 2-7 and Table 2-2. These allocations include rights to use certain drier year water supplies, such as stored "carryover" water. The Project will purchase water from the contracting growers to meet demand, and WWD will supply the water in accordance with an approved municipal and industrial (M&I) account for the Project. The Project will also contract with a participant in the existing Semitropic Water Bank to use currently stored Central Valley Project water to supplement Project water supplies if necessary during exceptionally dry periods. No groundwater will be used for Project purposes.

Figure 2-6
Existing Aqueduct and Water Distribution Line
and Proposed Project Connection

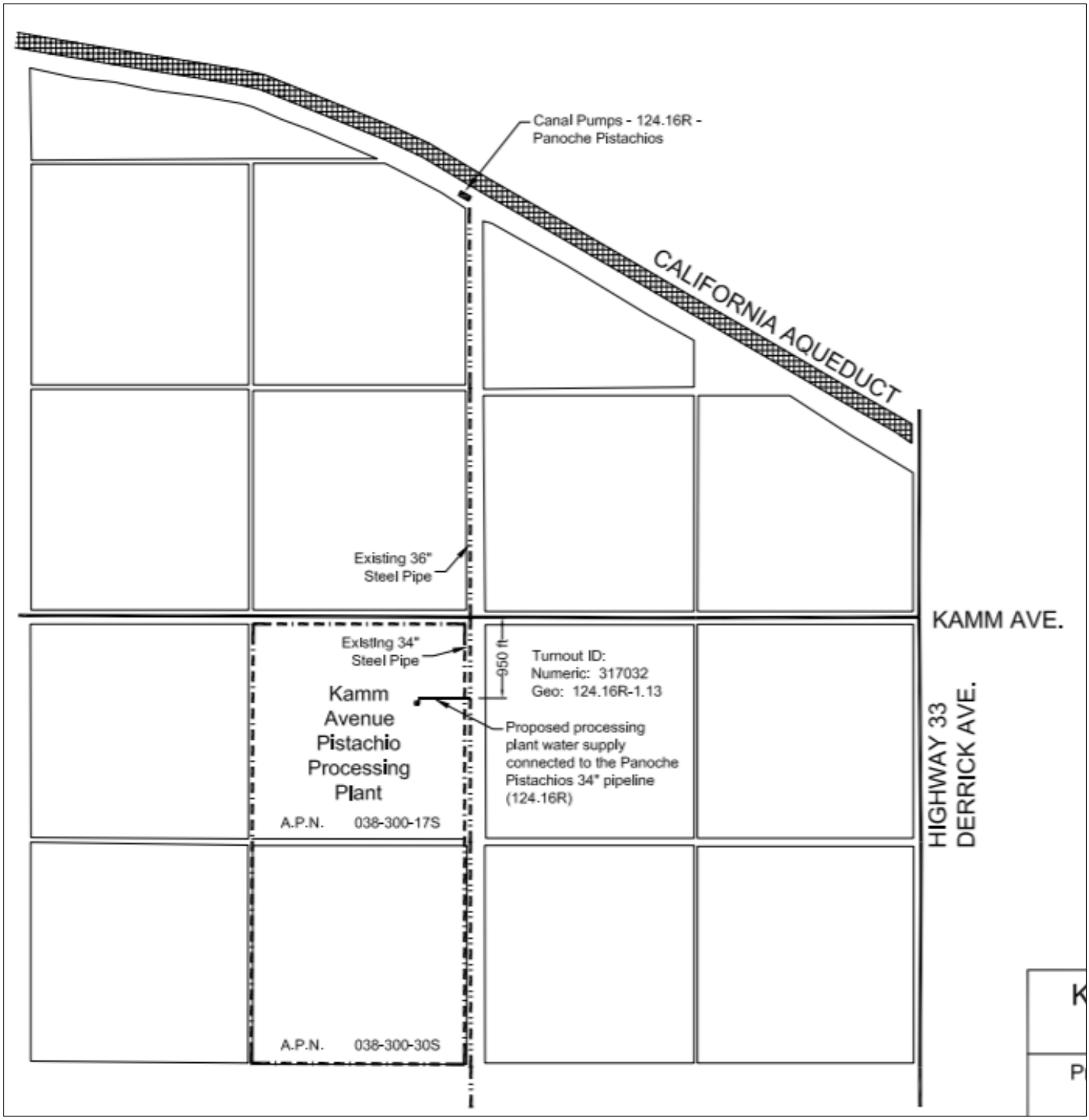


Figure 2-7
Regional Growers Contracting to Supply Project Water (See Table 2-2 for corresponding APN and acreage)

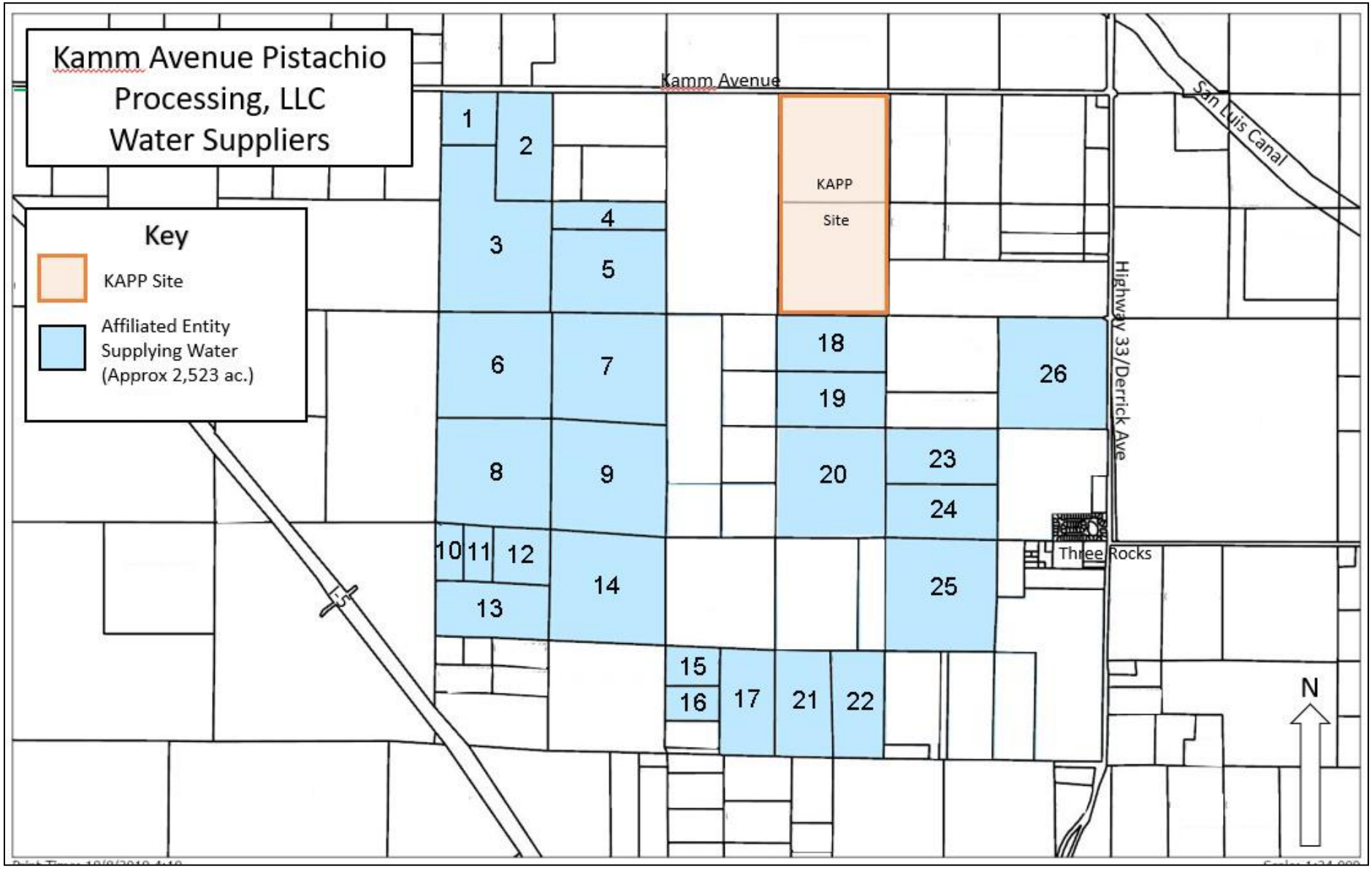


Table 2-2
Regional Growers Contracting to Supply Project Water APN and Acreage (From Figure 2-7)

Map Location Number	Assessor's Parcel Number	Acres		Map Location Number	Assessor's Parcel Number	Acres
1	038-141-54S	38.1		16	038-210-27S	25
2	038-141-56S	77.88		17	038-210-54S	80
3	038-141-55S	200		18	038-210-08	80
4	038-141-52	40		19	038-210-09	80
5	038-141-53	120		20	08-210-10S	160
6	038-210-01	160		21	038-210-69S	80
7	038-210-02S	160		22	038-210-70S	80
8	038-210-42S	160		23	038-210-14S	80
9	038-210-03S	160		24	038-210-15S	80
12	038-210-39S	40		25	038-210-74S	160
13	038-210-37S	80		26	038-210-63S	157.29
14	038-210-38S	160		27	038-210-76S	130.99
15	038-210-26	25				

The Project will use filtered and chlorinated water for the hulling process during the harvest, for onsite fire suppression, and for onsite landscaping. Hulling water would be supplied from an existing adjacent pipeline and routed through four sand and media raw water filters to remove solids. Extracted solids from the filtration process will be conveyed to the huller pit located under the hulling canopy. The filtered water will be chlorinated and stored in a 353,000 huller storage tank. The Project will construct and operate onsite water treatment facilities to produce water that meets domestic use standards for periodic process equipment, bin, and silo washing and employee consumption. Water will be conveyed from the huller water storage tank to the domestic water treatment system, including three domestic water filters, and will be stored in a 70,000-gallon domestic water tank. The onsite domestic water system will be permitted by the

County and the State Water Resources Control Board and will meet all applicable water quality requirements for domestic use.

Hulling process and domestic equipment wash water used in the facility will be directed to a hulling water and hull residue collection pit under the hulling canopy. Water and hull residue in the collection pit will be conveyed through two 18-inch diameter underground pipe to agitator, separator, and screen equipment to be constructed just north of two process water settling and cleaning ponds on the southeast border of the site. The hulling residue will be dewatered to a moisture content of approximately 12 percent and loaded into trucks at an adjacent loading dock for beneficial reuse offsite. The process water will be conveyed to two settling and cleaning ponds with a combined storage capacity of 32.59 million gallons, or 100 acre-feet. The process water will be used for pistachio crop irrigation in immediate vicinity of the Project in accordance with Waste Discharge Requirements that will be issued by the Central Valley Regional Water Quality Control Board.

Most of the Project's water demand will occur during the 6-week harvest period and be used in the hulling process using process water. Hulling operations would require up to 1.8 million gallons (5.5 acre-feet) per day. This is the maximum amount of water that would be used daily during the harvest period, however, the maximum amount will not be needed every day during the harvest period and will fluctuate downward on some days. The Project will use a total of 64.9 million gallons of process water (199.3 acre-feet) for hulling per harvest each year. The huller tank will also maintain a supply of 100,000 gallons of process water (0.3 acre-feet) for fire suppression purposes in accordance with Fresno County Fire Department requirements. Approximately 350,400 gallons (1.07 acre-feet) per year of process water from the huller tank would be also be used for onsite irrigation. Total Project process water demand will be approximately 65.4 million gallons (200.7 acre-feet) per year. During the non-harvest season, process water will only be used for on-site irrigation and fire suppression purposes.

Domestic water will be used for process equipment washing, which will occur 60 times per year. Process equipment washing will require 2,125,000 gallons (6.5 acre-feet) of domestic water per year. Bins used to store work in progress product will be washed 4 times per year, and each silo will be washed once per year. These activities will require approximately 285,00 gallons (0.9 acre-feet) of domestic water per year. Employee consumption will require approximately 315,000 gallons (1.09 acre-feet) of domestic water per year.

Table 2-3 summarizes the Project's total annual process and domestic water demand by primary use. The Project will require a total of approximately 68.1 million gallons (209 acre-feet) per year.

Table 2-3
Estimated Annual Water Demand for the Project

	Gallons	Acre-feet
Process water		
Hulling wash (harvest period only)	64,945,433	199.3
Fire suppression	100,000	0.3
Landscaping	350,400	1.08
Total Process	*65,395,833*	*200.7*
Domestic Water		
Process equipment wash	2,125,000	6.5
Bin wash	168,000	0.5
Silo wash	117,600	0.4
Employee	315,000	1.0
Total Domestic	*2,725,600*	*8.4*
Total Project water demand	**68,121,433**	**209**

The Project will recover and provide for irrigation reuse approximately 80 to 90 percent of the water supplied to the facility, or from 167 to 188 acre-feet per year. Irrigation water from Plant operations will be supplied to pistachio growers in the region from the process water settling and cleaning ponds located on the southern border of the site. This water will be conveyed from the ponds through existing offsite irrigation water distribution facilities. Based on water quality information from existing pistachio processing plants using similar source water, including anticipated nitrogen, potassium, and biochemical oxygen demand (BOD) levels that have been permitted in existing WDR orders adopted by the Regional Board, irrigation water from the Project would be used on a minimum of two acres of land per acre-foot to meet applicable water quality requirements. The water application area would include the 2,556 acres of irrigable land contracted to supply water for the Project, which would provide sufficient acreage to apply water from the facility at agronomical rates and in amounts that will meet applicable water quality requirements in the vicinity of the proposed facility as identified in Figure 2-8 and Table 2-2

Solid Materials

Organic solids will be produced from Project operations, primarily during the harvest period. These materials include pretreatment twigs, stems and other solids extracted prior to hulling, dewatered hull material, and pistachio shell blanks (see Table 2-4). Organic materials will also be generated by periodic cleaning of the process water settlement and cleaning ponds. Project operations, such as employee food consumption and paper and packaging material use, will generate organic and inorganic solid wastes which will be recycled to the extent feasible.

Table 2-4
Solid Materials Produced by the Project, Pounds per Year

	Pounds
Precleaning solids	5,015,772
Pistachio shell blanks (from hulling and processing operations)	6,000,000
Dewatered hull residue (12% moisture content)	13,064,654

The Project will market solids generated by the facility for beneficial reuse as soil amendments, cement filler (e.g., pistachio blanks), livestock feed, or mulch. The dewatered hull residue will be conveyed offsite for beneficial reuse, primarily in dairies. The beneficial reuse of other solids is subject to demand variability based on the market conditions that occur in each year. Precleaning and shell solids that are not beneficially reused will be conveyed to an adjacent solid materials management site or to unused portions of the 315-acre main facility site, shredded and/or dried, and disked into the soil (see Figure 2-9). The site will be operated in accordance with all applicable laws, regulations, and permit requirements. The Project will be served by Mid Valley Disposal, a private disposal service to collect and convey recycled and other waste generated from daily operations. The nearest Mid Valley Disposal facility is located approximately 30 miles northeast of the Project site at 15300 W. Jensen Ave., Kerman, CA 93630.

Figure 2-8
Project Irrigation Water Application Locations (See Table 2-2 for corresponding APN and acreage)

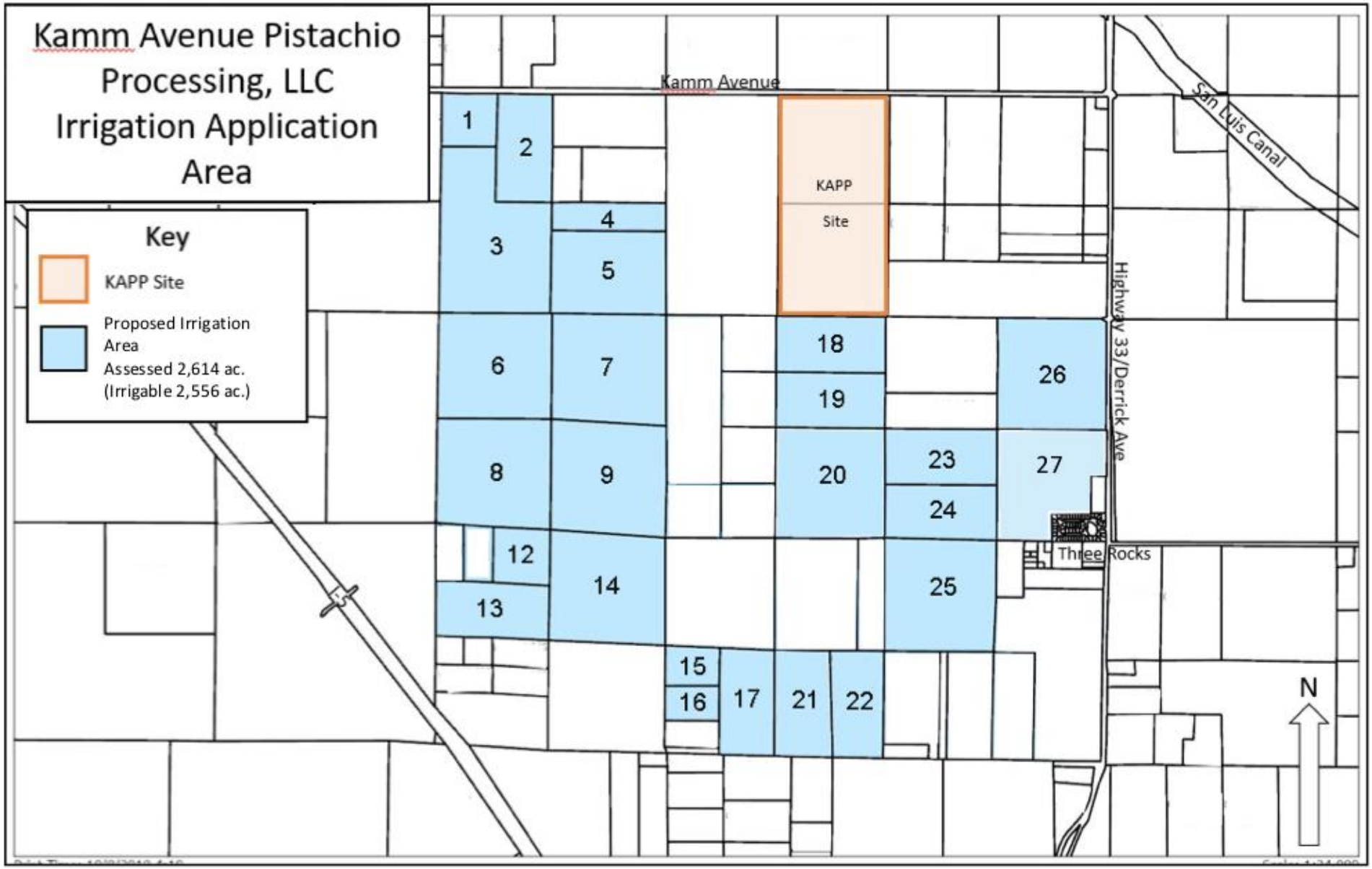
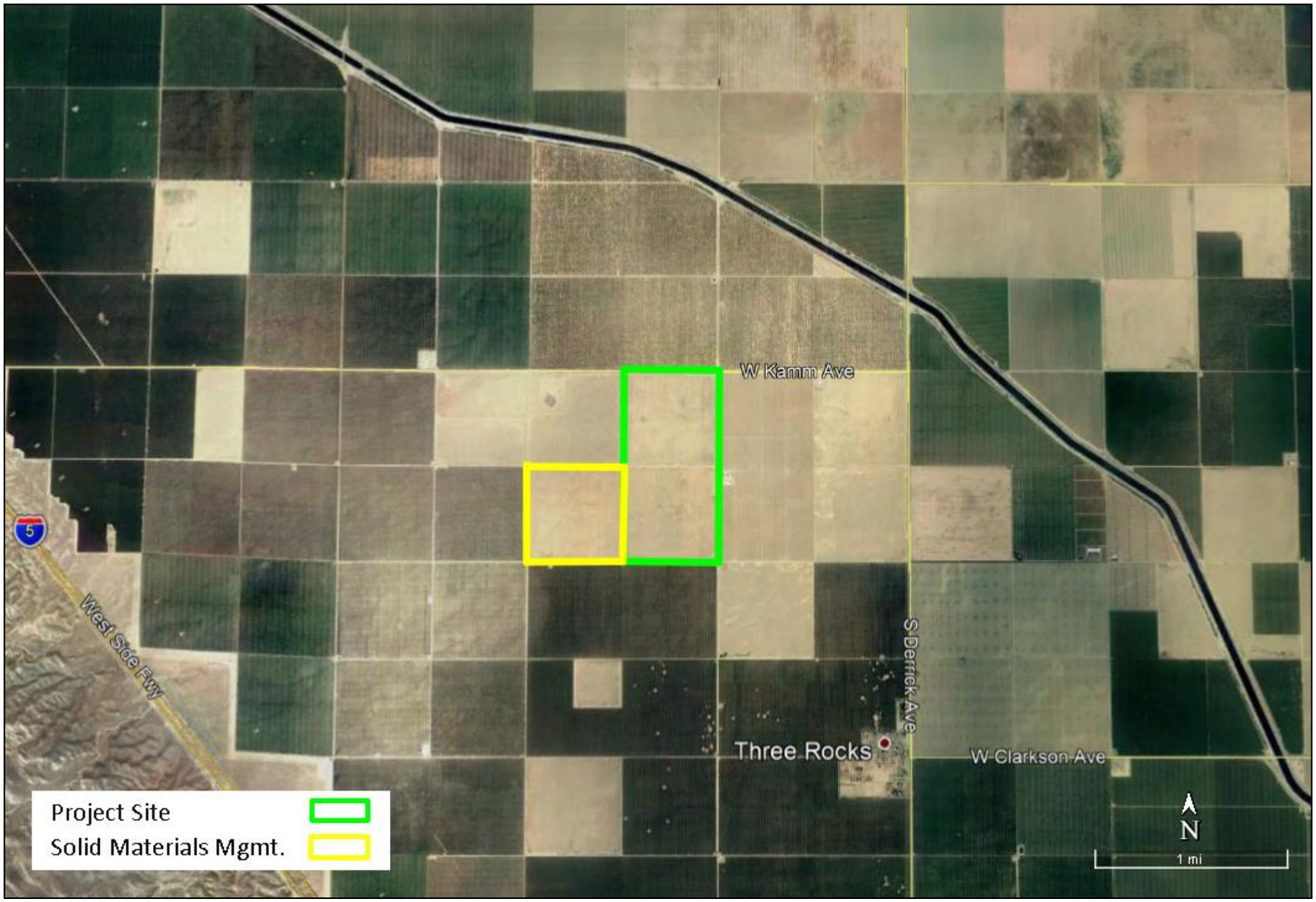


Figure 2-9
Solid Materials Management Site Location (yellow boundary) and Project site (green boundary)



Stormwater

All stormwater and incidental runoff within main plant area will be directed to an onsite unlined detention basin near the northeastern border of the site. The basin will have the capacity to store 21 acre-feet of stormwater and other runoff and will prevent offsite discharges from the site. Water retained in the basin will evaporate or be absorbed in the upper portions of the underlying soil formations and have no contact with local groundwater, which occurs at a depth of approximately 450 feet. The process water settling and cleaning ponds on the southern border of the site would only contain significant amounts of water for brief periods during the harvest and will be regularly drained for pistachio crop irrigation in the local area. Water from these ponds would be used for crop irrigation during harvest and non-harvest seasons. No offsite stormwater or nuisance flow discharges will occur from the ponds.

Traffic / Site Access

The main truck access to the Project site would be provided from Kamm Avenue where a scale and guard shack will be located southwest of the finished processing building. Harvest deliveries would enter the site and be directed to the guard shack. Other points of ingress and egress will be provided for emergency access as required by the Fresno County Fire Protection District and other applicable laws and regulations. All Project facilities will maintain applicable setbacks from public roadways and infrastructure required by the County, other regulations and laws, or deed restrictions and future rights-of-way, if applicable. The onsite roadway system would include harvest truck delivery and exit routes, finished product shipment and delivery access roads and loading and unloading docks, and other internal roads to access onsite equipment for maintenance and other purposes. The roads will vary in width from 20 to 42 feet wide and constructed to be consistent with facility maintenance requirements and Fresno County Fire Department standards. These roads would be paved or surfaced with crushed asphalt or another commercially available pervious materials and would provide a fire buffer, accommodate Project operations and maintenance activities, and facilitate on-site circulation for emergency vehicles.

All roads within the Project site will be constructed and maintained by the Project and will not be maintained by the County. All internal roads will be treated to avoid dust generation during construction and operation, including surfacing with crushed asphalt, gravel, compacted native soil, or a dust palliative. Temporary driveway aprons to points of ingress/egress during construction may be installed to accommodate construction traffic, but all permanent driveway aprons would be built according to Fresno County standards.

Regular traffic to and from the site will include employee vehicles, harvest trucks transporting raw pistachios to the site, shipping trucks for distributing finished products from the site, recycling and daily waste disposal, visitor trips, delivery trips, and maintenance vehicle trips. The Project may reduce the length of harvest truck trips delivering raw pistachios from local orchards for processing. These crops have historically been transported to processing plants located at least 30 miles from the orchards and in many cases outside of Fresno County. An adjacent solid materials management site will be used to disk hulling and processing solids that are not beneficially used by third parties. Table 2-5 summarizes the maximum daily number of trips and the annual total number of trips by type for the Project.

Table 2-5
Maximum Number of One-way Trips per Day by Season

Season	Employee	Harvest truck	Shipping truck	Solid materials reuse and disposal	Recyclable and daily solid waste	Visitors	Deliveries	Maint.	Total
January – August	60	0	5	0.4	0.2	0.2	0.6	0.4	66.8
September – October	120	150	8	9	2	2	2	2	295
November – December	60	0	8	0.4	0.2	0.2	0.6	0.4	69.8

The majority of Project operational traffic would occur on designated truck routes and major streets. Truck traffic will be routed to avoid traversing through local roads in nearby communities.

Fencing and Lighting

The boundary of the Project would be secured by a black 6-foot-high chain-link perimeter fence around the 80-acre main plant area, the fumigation area, the stormwater basin, and the process water ponds on the southern border of the site. Motion sensitive, directional security lights would be installed to provide adequate illumination around access points and operational locations within the site. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and will conform with applicable Fresno

County rules and regulations for outdoor lighting. Off-site security personnel could be dispatched during nighttime hours or could be onsite, depending on security risks and operating needs. Security cameras, motion detectors, or similar technology would be installed to allow for monitoring of the site through review of live footage 24 hours per day, 7 days per week. Security cameras or other equipment would be placed along the perimeter of the facility as needed.

During all phases of the Project, signage for safety and identification would be posted around the perimeter of the Project site. No large billboard or commercial advertisement signage will occur. All Project signage would conform with Fresno County signage requirements.

Construction

The construction of the Project facilities would occur over approximately 40 weeks. Construction equipment, including welding equipment, forklifts, grade-alls, scissor lifts and boom lifts, would be brought to the site by independent contractors as required for construction. Construction materials and equipment, including pipelines, cement, storage silos and scaffolding, building construction materials, roadway paving and pervious materials, precleaning, hulling, and processing equipment, dryers, pumps and conveyor systems, refrigerators for cold storage, and natural gas and electrical distribution equipment would be brought to the site for installation. No offsite staging or laydown areas would be required for construction. The construction areas would be secured by temporary or permanent fencing and security personnel as necessary for public safety. Temporary power would be provided via mobile generators or local distribution lines.

The site is generally level and has been historically graded or tilled. Project-related grading would be minimal and occur only as necessary to level dips and hills. The site cut and fill would be approximately balanced and no imported fill would be required for project construction. Since construction will disturb more than one acre of land, the Project will obtain construction period permit coverage under the state Construction General Permit and the National Pollution Discharge Elimination System program, including the preparation of a Stormwater Pollution Prevention Plan (SWPPP) . The SWPPP would be prepared by a qualified engineer or erosion control specialist, and would be implemented before construction to reduce potential impacts related to erosion and surface water quality during construction activities and throughout the life of the Project. The SWPPP would be submitted to the Regional Board and the County prior to issuance of building or grading permits.

Construction equipment would operate in accordance with all applicable laws, regulations, and permit requirements, including permits issued by the County. The majority of the labor force is

expected to be located in the County, including the City of Fresno and communities near the Project site. All materials for the Project's construction would be delivered by truck. The majority of truck traffic would occur on designated truck routes and major streets. Construction traffic will be routed to avoid traversing through local roads in nearby communities. Flatbed trailers and trucks would be used to transport construction equipment and construction materials to the site. Project components would be assembled on-site. Traffic resulting from construction activities would be temporary and would occur along major area roadways as workers and materials are transported to and from the Project site.

Prior to construction, a qualified biologist will be retained to conduct environmental awareness training for Project personnel, including a discussion of the defined access routes to the Project site and Project site boundaries within which Project activities must be accomplished. Construction employees would strictly limit their activities, vehicles, equipment, and construction materials to the Project footprint and designated routes of travel.

The Project would also coordinate with the California Office of the State Fire Marshall and the Fresno County Fire Department to provide training for personnel to minimize fire risk, properly manage combustible vegetation or agricultural products on and around the Project site, and discuss emergency responses and routes. Fire-suppression equipment (e.g., fire extinguishers) would be made available on the Project site at all times. All heavy equipment would be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

2.3 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the Project objectives:

- To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.
- To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.
- To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.
- To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio

crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.

- To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.

2.4 Other Required Approvals

The County of Fresno will be the Lead Agency for the proposed Project pursuant to the California Environmental Quality Act (CEQA). In additional to the certification of the Environmental Impact Report for the Project, the following County of Fresno approvals and permits will be required:

- Approval of the requested Classified Conditional Use Permit for the Project, including the onsite domestic water treatment facilities;
- Approval of a height variance for buildings and structures that are taller than the 35-foot height limit in the AE-20 zoning district. A total of 57 structures would require the variance as follows:
    - Installation of 49 nut storage silos that are 54′ 4″ tall
    - Installation of two "bag houses" that are 67′ tall
    - Installation of one cyclone that is 43′ 6″ tall
    - Installation of a processing building that is 46′ 8″ tall
    - Installation of catwalks, scaffolding and access equipment that are 64′ 7″ tall;
- Early cancellation of the existing Williamson Act Contracts on the Project site;
- Completion and approval of a Site Plan Review for the Project; and
- Approval of grading, building, and other County permits required to construct and operate the Project.

The Project will also require permits and approvals from other regulatory agencies, including the following:

- An Authority to Construct and Permit to Operate issued by the San Joaquin Valley Air Pollution Control District;
- Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board; and
- Drinking water source assessment and other applicable domestic water system approvals issued by the State Water Resources Control Board.

Chapter 3

ENVIRONMENTAL SETTING, IMPACTS & MITIGATION

3.1 Aesthetics

This section of the DEIR identifies potential impacts of the proposed Project on visual character, scenic resources, views, scenic highways and sources of light and glare. No NOP comment letters were received pertaining to Aesthetics.

Environmental Setting

Project Site and Surrounding Areas

The proposed Project site is located on the Central Valley floor in western unincorporated Fresno County, California, between the California Aqueduct and Interstate 5 (I-5). The unincorporated community of Three Rocks, a U.S. Census designated place with a population of approximately 250, is located approximately 1.5 miles to the south of the KAPP facility's primary pistachio hulling and processing equipment. The nearest major roadway intersection is West Kamm Avenue and State Route 33, approximately one mile to the east. I-5 is located approximately 2.5 miles to the southwest on the eastern edge of the Diablo Range foothills. The California Aqueduct is located approximately 1 mile to the northeast. This portion of the Valley is characterized visually by agricultural lands containing a relatively low level of development. The topography of the area is relatively flat, but elevations gradually rise to the west and south toward the steeper hillsides within the Diablo Range. The topographic characteristics of the region allow for open, expansive views of the distant hillsides and mountains that surround the flat valley floor, which has been highly altered to support agriculture activities. Other land uses in the proposed Project area include open space as well as sparse residential and commercial development. Existing utility facilities are present throughout the proposed Project area.

The Project site designated as Agricultural in the Fresno County General Plan and zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size). The site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. No shrubs, trees or jurisdictional wetlands or waters are located on the Project site. In late 2019, grading, excavation, foundation installation, crushed asphalt deposition and the placement of two storage silos and other structures occurred, primarily within the northern 80 acres of APN 038-300-17S. Thus, the environmental baseline for evaluating potential Project impacts is June 1, 2019, which is prior to the development of existing improvements on the site. Refer to Site Photographs 1 – 6 for representative pictures of the Project site and surrounding areas.

Photograph 1: View of the northeast corner of the Project site (July 2020)[1].

Photograph 2: View of the water settling and cleaning pond site (July 2020)[2].

[1] Biological Analysis Report for the Kamm Avenue Processing Plant Project (Appendix B), Page B-1.

[2] Ibid, Page B-2.

Photograph 3: View of the solid materials management site (July 2020)[3].

Photograph 4: View of the most western portion of natural gas service line Route A (July 2020)[4].

[3] Biological Analysis Report for the Kamm Avenue Processing Plant Project (Appendix B), Page B-2.

[4] Ibid, Page B-3.

Photograph 5: View of pistachio orchards in the land application area (July 2020)[5].

Photograph 6: Aerial view of processing plant site with improvements made after June 1, 2019 (Aug 2020)[6].

[5] Biological Analysis Report for the Kamm Avenue Processing Plant Project (Appendix B), Page B-4.

[6] Ibid, Page B-1.

State Scenic Highways

According to the California Department of Transportation Scenic Highway Program, there are no designated State Scenic Highways within Fresno County. There are three segments of Eligible State Scenic Highways within the County, the closest being a segment of State Route 198 near Coalinga, located over 25 miles south of the Project site.[7] No eligible highways are within or adjacent to the Project site.

Regulatory Setting

Federal Regulations

There are no applicable federal regulations, plans or policies pertaining to aesthetics that are applicable to the proposed Project.

State Regulations

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (CEC) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on November 5, 2003 and went into effect on October 1, 2005. The changes included new requirements for outdoor lighting, which vary according to which "lighting Zone" the equipment is in. The CEC defines rural areas as Lighting Zone 2. Existing outdoor lighting systems are not required to meet these lighting allowances.

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The state laws governing the scenic highways program are found in the Streets and Highways Code Sections 260-263.

[7] California Department of Transportation. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed October 2020.

Local Regulations

The Open Space and Conservation Element of the Fresno County General Plan evaluates the County's scenic resources and provides policies intended to protect scenic resources to ensure that development enhances those resources through various measures including identification, development review, acquisition, and other methods.

The Fresno County General Plan also includes policies intended to protect scenic resources along County roadways by identifying, developing, and maintaining scenic amenities along roads and highways in the County and ensuring that development enhances those resources. According to Policy OS-L.1, the County has designated a system of scenic roadways that includes landscaped drives, scenic drives, and scenic highways.

The Open Space and Conservation element includes specific goals and policies related to scenic resources. Those that apply to the proposed project are listed below.

> **Goal OS-K:** To conserve, protect, and maintain the scenic quality of Fresno County and discourage development that degrades areas of scenic quality.
>
> **Policy OS-K.1:** The County shall encourage the preservation of outstanding scenic views, panoramas, and vistas wherever possible. Methods to achieve this may include encouraging private property owners to enter into open space easements for designated scenic areas.
>
> **Goal OS-L:** To conserve, protect, and maintain the scenic quality of land and landscape adjacent to scenic roads in Fresno County.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Appendix G Checklist:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impacts and Mitigation Measures

Impact 3.1-1: *Have a substantial adverse effect on a scenic vista?*

Less than Significant Impact. A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The Diablo Coastal Mountain Range, located approximately 2.6 miles west of the Project site, is the only natural visual resource in the Project area. Views of these mountains are afforded only during clear conditions due to poor air quality in the San Joaquin Valley. Distant views of the Diablo Coastal Mountain Range would largely be unaffected by the development of the Project because of the nature of the Project, distance from the mountains, intervening land uses and limited visibility of these features. The County of Fresno does not identify views of these features as required to be "protected."

There are no designated scenic vistas in the Project vicinity, nor is the Project site prominently visible from the relatively few locations where expansive views are available. Therefore, Project impacts to scenic vistas are ***less than significant***.

Mitigation Measures: None are required.

Impact 3.1-2: *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Less Than Significant Impact. As described herein, the site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. There are no trees, rock outcroppings or historic buildings located on or near the Project site. According to the California Department of Transportation Scenic Highway Program, there are no designated State Scenic Highways within Fresno County. There are three segments of Eligible State Scenic Highways within the County, the closest being a segment of State Route 198 near Coalinga, located over 25 miles south of the Project site.[8] No eligible highways are within or adjacent to the Project site. Therefore, there is a ***less than significant*** impact.

Mitigation Measures: None are required.

[8] California Department of Transportation. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed October 2020.

Impact 3.1-3: *Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less Than Significant Impact. Implementation of the Project would result in the conversion of agricultural and/or vacant land to a pistachio processing facility. New development would incrementally reduce views to open agricultural land now available to some residents and travelers on adjacent roadways. Visual changes caused by a project are evaluated in terms of their visual contrast with the area's predominant landscape elements and features, their dominance in views relative to other existing features, and the degree to which they could block or obscure views of aesthetically pleasing landscape elements.

The Project site is within an area dominated by large-parcel agricultural uses with few scattered residences and some commercial businesses. Views of the Diablo Coastal Mountain Range and surrounding agricultural lands will remain but may be incrementally reduced for some residents or visitors to the extent that new structures associated with the Project might block or obscure some views. However, the Project site is relatively remote and would not substantially alter the visual character within the site's immediate surroundings. While the site itself will be changed from historical agricultural crops to a pistachio processing facility, the existing dominant visual character in the surrounding area would remain agriculture. This portion of the San Joaquin Valley is a landscape that has been extensively altered and is almost entirely managed for agricultural production, which requires related industrial/commercial components. The improvements such as those proposed by the Project are typical of large agricultural areas and are generally expected to occur in areas with large agricultural production. These improvements would not substantially degrade the visual character of the area and would not diminish the visual quality of the area, as they would be consistent with the existing visual setting and development patterns in the region. The Project itself is not visually imposing against the scale of the existing agricultural setting and nature of the surrounding area.

The Project is also seeking approval of a height variance for buildings and structures that are taller than the 35-foot height limit in the AE-20 zoning district. A total of 57 structures would require the variance as follows:

- Installation of 49 nut storage silos that are 54′ 4″ tall
- Installation of two "bag houses" that are 67′ tall
- Installation of one cyclone that is 43′ 6″ tall
- Installation of a processing building that is 46′ 8″ tall
- Installation of catwalks, scaffolding and access equipment that are 64′ 7″ tall;

While these proposed structures would exceed the established height limit, these structures will generally only be visible from Kamm Avenue in the immediate area and from adjacent agricultural lands. Therefore, the visual impact associated with the height of these structures will be limited and will not result in a significant degradation of the existing scenic quality of the area. The impact is considered to be ***less than significant.***

Mitigation Measures: None are required.

Impact 3.1-4: *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Less Than Significant Impact With Mitigation. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass." Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Spillover light is light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited. Spillover light can adversely affect light-sensitive uses, such as residential neighborhoods at nighttime. Because light dissipates as it travels from the source, the intensity of a light fixture is often increased at the source to compensate for the dissipated light. This can further increase the amount of light that illuminates adjacent uses. Spillover light can be minimized by using only the level of light necessary, and by using cutoff type fixtures or shielded light fixtures, or a combination of fixture types.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

The Project would introduce new on-site sources of lighting. The Project will introduce new lighting that will be typical of agricultural commercial facilities such as security lighting, lights from vehicles, and lighting during operation of the Project. Additional night lighting sources on the Project site, especially any unshielded light, could result in spillover light that could impact surrounding properties. This would create new sources of light that could potentially have a significant impact on nighttime light levels in the area. During the entitlement process, County staff will review lighting plans to ensure that lights are located in areas that will minimize light sources to neighboring properties. Further, Mitigation Measure AES-1 requires lighting systems to be shielded to direct light to ground surfaces and orient light away from adjacent properties.

As a result, the Project will implement the necessary mitigation measures and will have a ***less than significant impact*** on aesthetics.

Mitigation Measures:

AES-1: All outdoor lighting shall be hooded, directed downward, and permanently maintained to not shine towards adjacent properties and roads.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to aesthetics includes the viewshed of the proposed Project and the areas surrounding the Project site from which the Project could be visible to viewers in the area. As described above, the Project will result in less than significant visual or aesthetic impacts. Construction of future projects in the area allowed under Fresno County General Plan would be required to be in compliance with the numerous policies and programs related to the preservation and enhancements of viewsheds and the protection of scenic resources. As such, the project would have a ***less than cumulatively considerable impact*** to visual and scenic resources.

3.2 Agricultural Resources

This section of the DEIR identifies potential impacts of the proposed Project pertaining to Agricultural Resources. No NOP comment letters were received pertaining to this topic.

Environmental Setting

As described in Section 2.1, the Project site is located in the western portion of Fresno County, in an area dominated by agricultural land uses. The Project site designated as Agricultural in the Fresno County General Plan and zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size). The Project site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. No shrubs, trees or jurisdictional wetlands or waters are located on the Project site. The parcels, including the Solid Materials Management (SMM) site, have not been used for commercial agricultural purposes since they were acquired in 2011; however, historical records indicate that that the northern parcel, APN 038-300-17S, has not been used for agriculture since at least 2009. The southern parcel, APN 038-300-30S, and the SMM site, has not been used for agriculture since 2006. Neither parcel or the SMM site contains soil identified as prime, statewide important, or unique farmland by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). The current FMMP map for Fresno County identifies the Project site and SMM site as farmland of local importance,[1] which includes all farmable lands within the County that do not meet the definitions of prime, statewide, or unique and land that is or has been used for irrigated pasture, dryland farming, confined livestock and dairy, poultry facilities, aquaculture and grazing. The FMMP map for the County identifies areas to the north, east and west as prime agricultural land, most of which is planted with pistachio trees. APN 038-300-17S and the western 80 acres of APN 038-300-30S are subject to existing Williamson Act Contract No. 365. The eastern 80 acres of APN 038-300-30S are subject to existing Williamson Act Contract No. 1839. Notices of nonrenewal were filed with the County for the portions of these Williamson Act contracts applicable to the Project site on September 20, 2019.

The majority of forest land occurs in the eastern portion of Fresno County, in the Sierra Nevada foothills and Sierra Nevada. The Project site does not contain any land defined as forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code

[1] California Department of Conservation. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed October 2020.

section 4526), or land zoned Timberland Production (as defined by Government Code section 51104(g)).

Regulatory Setting

Federal Regulations

Farmland Protection Policy Act

The federal Farmland Protection Policy Act, part of the Agriculture and Food Act of 1981, was passed in response to the National Agricultural Land Study of 1980-1981 which found that millions of acres of farmland were being converted in the U.S. each year and a related report which found that much of this conversion was the result of programs funded by the federal government. The intent of the Act is to minimize the impact that federal programs have on unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that – to the extent possible – federal programs are administered to be compatible with state and local government and private programs and policies to protect farmland.

State of California Regulations

Farmland Mapping and Monitoring Program

The California Department of Conservation uses the Natural Resources Conservation Service soil classifications to classify agricultural lands under the Farmland Mapping and Monitoring Program (FMMP). The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. These designated agricultural lands are included in the farmland maps used in planning for the present and future of California's agricultural resources. The California Department of Conservation has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications. The categories are described below. In addition to mapping existing farmland, the FMMP provides analysis of agricultural land use changes throughout California.

California Public Resources Code, Division 13 Environmental Quality, Section 21060.1 defines agricultural land for the purposes of assessing environmental impacts. Collectively, land classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is referred to as "agricultural land." These same classifications of farmland are described as Important Farmland under the FMMP and are the also used in CEQA Guidelines Appendix G as the farmland classifications on which impacts on agricultural resources are to be evaluated.

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

Unique Farmland. This is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. The land must have been cropped at some time during the four years prior to the mapping date.

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

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

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

Urban and Built-up Land. Land occupied by structures with a building density of at least one building unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public and transportation uses, and other developed purposes.

Other Land. Land not included in any other mapping category, including low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; animal confinement facilities; mines; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use as a means of preserving California's prime agricultural lands from urbanization. Prime Farmland under the

Williamson Act includes land that qualifies as Class I and II under the Natural Resources Conservation Service classification of land. Through the voluntary contracts between landowners and a city or county, the owners agree to retain their lands in agricultural or other open space uses for a minimum of 10 years.

In return for entering into a Williamson Act contract, landowners receive property tax relief on the lands under contract. This relief is provided through the assessment of lands based upon their income-producing value rather than their market value, which may be considerably higher. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.

To remove a property from a Williamson Act contract, a landowner has two primary options as described below.

Non-renewal. Submittal of a non-renewal application is the most common means to exit a Williamson Act contract. Once the non-renewal form is recorded, the non-renewal period is approximately nine years. All of the contract restrictions remain in effect until the expiration date. To be valid in any contract year the Notice of Non-Renewal must be recorded prior to October 1st or the notice will not take effect until the following renewal date.

Request for Cancellation. Any landowner whose land is under Williamson Act contract may petition the board of supervisors or city council for cancellation of the contract. The board or council may grant tentative approval for cancellation of a contract only if it makes one of the following two findings based on substantial evidence:

- Cancellation is Consistent with the Williamson Act. Required findings:
    - Cancellation is for land on which a notice of non-renewal has been served pursuant to California Government Code Section 51245;
    - Cancellation is not likely to result in the removal of adjacent lands from agricultural use;
    - Cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan;
    - Cancellation will not result in discontiguous patterns of urban development; and
    - There is no proximate non-contracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land; or

- Cancellation is in the Public Interest. Required findings:
    - Other public concerns substantially outweigh the objectives of this chapter; and
    - There is no proximate non-contracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development.

A proposed contract cancellation may be approved by a board of supervisors or city council only after it is reviewed and commented on by the California Department of Conservation. Cancellation of a Williamson Act contract generally requires that the landowner pay fees equal to 12.5 percent of the full market value of the property.

Local Regulations

Fresno County General Plan

The Agriculture and Land Use Element of the General Plan states that, "since most of the county's highly productive agricultural soils could be easily developed by urban, rural residential, and other non-agricultural uses, careful land use decision-making is essential to minimizing the conversion of productive agricultural land to non-agricultural uses." [2] The conversion of agricultural land diminishes the County's agricultural production capacity and economic viability and would detrimentally impact surrounding agricultural operations to the extent that further losses in production may occur.

The Agriculture and Land Use Element of the Fresno County General Plan describes land use designations and development standards for unincorporated land in the County and sets out goals, policies, and programs related to agricultural resources. The General Plan land use designation for the Project site is Agriculture, which provides for the production of crops and livestock, and for location of necessary agricultural commercial centers, agricultural processing facilities, and certain non-agricultural activities. No overlay designations apply to the Project site. The following General Plan policies under Goal LU-A are applicable to the proposed Project:

Policy LU-A.1 The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands

[2] Fresno County General Plan. October 2000. https://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_policy_doc/AgElement_rj.pdf. Page 2-10. Accessed October 2020.

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. 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:
    a. Commercial uses should be clustered in centers instead of single uses.
    b. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four miles from any existing or approved agricultural or rural residential commercial center or desggnated commercial area of any city or unincorporated community.
    c. New commercial uses should be located within or adjacent ot existing centers.
    d. Sites should be located on a major road serving the surrounding area.
    e. Commercial centers should not encompass more than one-quatter mile of road frontage, or one-eighth mile if both

sides of the road are involved, and should not provide potential for developments exceeding ten separate business activities, exclusive of care takers' residences;

f. For 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

Fresno County Zoning Ordinance

The Project site is zoned Exclusive Agricultural, with a minimum lot size of 20 acres (AE-20). As indicated in Section 816 of the Fresno County Zoning Ordinance, permitted uses in AE districts include raising livestock, poultry, and plant crops; single-family residences and accessory and farm buildings; and other agricultural and home occupation uses.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item. 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?
- Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- Result in the loss of forest land or conversion of forest land to non-forest use?
- 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?

Impacts and Mitigation Measures

Impact 3.2-1: *Convert Prime Farmland, Unique Farmland, or Farmland of statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The proposed Project site does not contain soils identified as prime, statewide important, or unique farmland by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). The current FMMP map for Fresno County identifies the Project site as farmland of local importance,[3] which includes all farmable lands within the County that do not meet the definitions of prime, statewide, or unique and land that is or has been used for irrigated pasture, dryland farming, confined livestock and dairy, poultry facilities, aquaculture and grazing.

Furthermore, the proposed Project includes the development of a Pistachio Processing Plant which is a value-added agricultural use. Pistachio orchards owned and operated by affiliated entities in the Project vicinity will be served by the proposed processing facilities, and as such, proposed Project development will benefit and support existing agricultural operations in the region. There are ***no impacts*** related to the conversion of agricultural land.

Mitigation Measures

None are required.

Impact 3.2-2: *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact.

<u>Agricultural Zoning</u>

The Project site is designated in the General Plan as Agricultural and is classified by the Zoning Ordinance as AE-20 (Exclusive Agricultural, 20-acre minimum parcel size). The zoning designation allows for value-added agricultural processing facilities (such as nut hulling and processing facilities) subject to an approved Conditional Use Permit (CUP). Therefore, with the

[3] California Department of Conservation. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed October 2020.

approval of the CUP, no conflicts with agricultural zoning would occur and there would be ***no impact*** related to an agricultural zoning conflict.

Williamson Act Contract

As noted, the Project site is subject to a Williamson Act contract, pursuant to Government Code Section 51200 et seq. Once executed, a Williamson Act contract may only be cancelled under certain specified conditions. Only two such conditions potentially apply to the Project: (1) cancellation is consistent with the Williamson Act (Gov. Code § 51282(b); and (2) cancellation is in the public interest (Gov. Code § 51282(c)).

Cancellation of a Williamson Act contract pursuant to §51282(b) requires that the Fresno County Board of Supervisors make five findings, as follows:

- The cancellation is for land on which a notice of nonrenewal has been served pursuant to Government Code Section 51245;
- That cancellation is not likely to result in the removal of adjacent lands from agricultural use;
- That cancellation is for an alternative use which is consistent with the applicable provisions of the county or city general plan;
- That cancellation will not result in discontiguous patterns of urban development; and
- That there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that the development of the contracted land would provide more contiguous patterns of urban development of proximate noncontracted land.

With the approval of the Williamson Act Contract cancellation, there would be no conflict with a Williamson Act Contract and as such, ***no impacts*** to this subject area.

Mitigation Measures

None are required.

Impact 3.2-3: *Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland as defined by Public Resources Code section 4526), or*

timberland zoned Timberland Production (as defined by Government Code section 51104(g)), or result in the loss of forest land or convert forest land to non-forest use?

No Impact. The proposed Project site lies in the western portion of the Central Valley floor, where there is no forest land. The Project is not zoned for forestland, timberland, or timberland zoned Timberland Production and does not propose any zone changes related to forest or timberland. As such, there are ***no potential impacts*** resulting from forest or timber land conflicts or conversion of forest land to non-forest use.

Mitigation Measures

None are required.

Impact 3.2-4: *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?*

No Impact. As discussed in Impact 3.2-1 and 3.2-3, the proposed Project is not located on Farmland as designated by the FMMP and the new pistachio processing plant will benefit and support the surrounding agricultural operations. Additionally, there is no forest land in the Project vinicity. There is ***no impact.***

Mitigation Measures

None are required.

Cumulative Impacts

No Impact. The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map. As discussed above, the Project includes an agricultural use and will benefit and support regional agricultural operations. Additionally, there is no forest land in the Project vicinity. As such, the Project will not result in project-specific impacts and will result in ***no cumulatively considerable*** impacts on agricultural resources and instead will support existing agricultural activities in the region.

3.3 Air Quality

This section of the DEIR evaluates the potential air quality impacts associated with the implementation of the proposed Project. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (District) for quantification of emissions and evaluation of potential impacts to air resources. The information and analysis presented in this Section are based on the Air Quality and Greenhouse Gas Analysis Reports (AQGGA) prepared for this Project by Mitchell Air Quality Consulting. The full AQGGA can be reviewed in Appendix A. No NOP comment letters were received pertaining to this topic.

Environmental Setting

San Joaquin Valley Air Basin

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The climate is important for air quality because of differences in the atmosphere's ability to trap pollutants close to the ground, which creates adverse air quality; inversely, the atmosphere's ability to rapidly disperse pollutants over a wide area prevents high concentrations from accumulating under different climatic conditions. The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.[1]

[1] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 11.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Mojave Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong, low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10}.

Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the Project area. Table 3.3-1 summarizes 2016 through 2018 published monitoring data, which is the most recent three-year period available. The table displays data from the Tranquility monitoring station (located at 32650 W. Adams Avenue approximately 7.2 miles north of the Project site) and the Fresno-Garland monitoring station (located approximately 43.7 miles northeast of the Project site. The data show that during the past few years, the project area has exceeded the standards for ozone (state and national), PM_{10} (state), and $PM_{2.5}$ (national). The data in the table reflect the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Fresno County or the San Joaquin Valley Air Basin were available for carbon monoxide and SO_2. Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 3.3-1
Air Quality Monitoring Summary[2]

Air Pollutant	Averaging Time	Item	2016	2017	2018
Ozone[a]	1 Hour	Max 1 Hour (ppm)	0.093	0.087	0.088
		Days > State Standard (0.09 ppm)	0	0	0
	8 Hour	Max 8 Hour (ppm)	**0.081**	**0.076**	**0.083**
		Days > State Standard (0.07 ppm)	19	10	7
		Days > National Standard (0.070 ppm)	21	10	7
Carbon monoxide (CO)	8 Hour	Max 8 Hour (ppm)	ND	ID	ND
		Days > State Standard (9.0 ppm)	ND	0	ND
		Days > National Standard (9 ppm)	ND	0	ND
Nitrogen dioxide (NO_2)[b]	Annual	Annual Average (ppm)	0.010	0.011	0.011
	1 Hour	Max 1 Hour (ppm)	0.056	0.057	0.068
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse	Annual	Annual Average (µg/m^3)	35.4	39.4	40.6
	24 hour	24 Hour (µg/m^3)	91.9	**160.1**	130.4

[2] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 20-21.

Air Pollutant	Averaging Time	Item	2016	2017	2018
particles (PM_{10})[b]		Days > State Standard (50 µg/m³)	67.5	97.4	102.7
		Days > National Standard (150 µg/m³)	0	1	0
Fine particulate matter ($PM_{2.5}$)[a]	Annual	Annual Average (µg/m³) 12.0 µg/m³	7.7	8.3	11.1
	24 Hour	24 Hour (µg/m³)	**39.7**	**62.4**	**94.5**
		Days > National Standard (35 µg/m³)	2.4	6.0	16.0

Notes:

> = exceed ppm = parts per million µg/m³ = micrograms per cubic meter

ID = insufficient data ND = no data max = maximum

Bold = exceedance of State or Federal Standard

State Standard = California Ambient Air Quality Standard

National Standard = National Ambient Air Quality Standard

[a] Tranquility Monitoring Station

[b] Fresno Garland Monitoring Station

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest of these is comparable with the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount by which the standard is exceeded. The U.S. Environmental Protection Agency (EPA) developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air.

Table 3.3-2 provides a description of the health impacts of ozone at different concentrations.

Table 3.3-2
Air Quality Index and Health Effects from Ozone[3]

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI—51–100—Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 55–70 ppb	**Health Effects Statements**: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI—101–150—Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 71–85 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI—151–200—Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 86–105 ppb	**Health Effects Statements**: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI—201–300—Very Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.

[3] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 22.

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
Concentration 106–200 ppb	**Health Effects Statements**: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.

The AQI for the 8-hour ozone standard was recently changed to reflect the current NAAQS of 70 parts per billion (ppb). Based on the AQI scale for the 8-hour ozone standard, the project area as measured at the Tranquility monitoring station experienced no days in the last three years that would be categorized as very unhealthy (AQI 201–250) or unhealthy (AQI 151–200), and 36 days that were unhealthy for sensitive groups (AQI 101–150). Readings at AQI 101 and above violate the standard. The highest reading was 83 parts per billion (ppb) (AQI 143—unhealthy for sensitive groups) in 2018, compared with the 86-ppb cutoff point for unhealthy (AQI 151) and the federal standard of 70 ppb.

The other nonattainment pollutant of concern is $PM_{2.5}$. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 12.1 to 35.4 μg/m^3. An AQI of 101 to 150 or 35.5 to 55.4 μg/m^3 is considered unhealthful for sensitive groups. When concentrations reach this amount, it is considered an exceedance of the federal $PM_{2.5}$ standard. The monitor at the Tranquility station exceeded the national standard on 2 days in 2016, 6 days in 2017 and 16 days in 2018. People with respiratory or heart disease, the elderly and children are the groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion. The AQI of 151 to 200 is classified as unhealthy for everyone. This AQI classification is triggered when $PM_{2.5}$ concentration ranges from 55.4 to 150.4 μg/m^3. At this concentration, there is increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and in the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. Everyone else should reduce prolonged or heavy exertion. The highest concentration recorded at the Tranquility monitoring station in the last three years was 94.5 μg/m^3 (AQI 171—Unhealthy) in 2018. At this concentration, there is an Increasing likelihood of respiratory

symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. The relationship of the AQI to health effects in shown Table 3.3-3.

Table 3.3-3
Air Quality Index and Health Effects of Particulate Pollution[4]

Air Quality Index/ $PM_{2.5}$ Concentration	Health Effects Description
AQI—51–100—Moderate Concentration 12.1–35.4 µg/m^3	**Sensitive Groups**: Some people who may be unusually sensitive to particle.
	Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
	Cautionary Statements: Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.
AQI—101–150—Unhealthy for Sensitive Groups Concentration 35.5–55.4 µg/m^2	**Sensitive Groups**: Sensitive groups include people with heart or lung disease, older adults, children, and teenagers.
	Health Effects Statements: Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly.
	If you have heart disease: Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
AQI—151–200—Unhealthy Concentration 86–105 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and

[4] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 23-24.

Air Quality Index/ $PM_{2.5}$ Concentration	Health Effects Description
	adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI—201–300—Very Unhealthy Concentration 106–200 ppb	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.

Attainment Status

The EPA and the California Air Resources Board (ARB) 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 values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the Air Basin are shown in Table 3.3-4. The Air Basin is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 3.3-4
San Joaquin Valley Air Basin Attainment Status[5]

Pollutant	State Status	National Status
Ozone—One Hour	Nonattainment/Severe	No Standard
Ozone—Eight Hour	Nonattainment	Nonattainment/Extreme
Carbon monoxide	Attainment/Unclassified	Merced, Madera, and Kings Counties are unclassified; others are in Attainment
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	No Designation/Classification

Regulatory Setting

Federal Regulations

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA: particulate matter, ground-level ozone, carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), and lead. The EPA labels these pollutants as criteria air pollutants because they are regulated by developing human health-based and/or environmentally based criteria (science-based guidelines), which sets permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to

[5] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 25.

prevent environmental and property damage are called secondary standards.[6] The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.[7]

State of California Regulations

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than the federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

[6] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 12.

[7] Ibid. Page 12.

Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants (HAP). Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. ARB and local air districts regulate TACs and HAPs in California.

Air Pollutant Description and Health Effects

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increased risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause a cough, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 1 of Appendix A.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines,

the composition of the emissions varies, depending on: engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Health risks attributable to the top 10 TACs listed above are available from the ARB as part of its California Almanac of Emissions and Air Quality—2009 Edition.[8] As shown therein for data collected at the First Street air monitoring station in Fresno, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007. Risks associated with DPM emissions are provided only for the year 2000 and have not been updated in the Almanac. Although more recent editions of the Almanac do not provide estimated risk, they do provide emission inventories for DPM for later years. The 2013 Almanac provided emission inventory trends for DPM from 2000 through 2035. The same Almanac reports that DPM emissions were reduced in the SJVAB from 16 tons per day in 2000 to 11 tons per day in 2010, a 31 percent decrease. DPM emissions in the San Joaquin Valley are projected to decrease to six tons per day by 2015, a 62 percent reduction from year 2000 levels. ARB predicts a reduction to three tons per day by 2035, which would be an 81 percent reduction from year 2000 levels. Continued implementation of the ARB's Diesel Risk Reduction Plan is expected to provide continued reductions in DPM through 2020 and beyond through regulations on this source.[9]

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in

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[8] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 19.

[9] Ibid. Page 20.

buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level, and each agency has a different level of regulatory responsibility: the EPA regulates at the national level, the ARB at the state level, and the District at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards—also known as the federal standards described earlier.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts; specifically, an air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The ARB then submits the to the EPA for approval. After reviewing submitted SIPs, the EPA proposes to approve or disapprove all or part of each plan. The public has an opportunity to comment on the EPA's proposed action. EPA considers public input before taking final action on a state's plan. If EPA approves all or part of a SIP, those control measures are enforceable in federal court. If a state fails to submit an approvable plan or if EPA disapproves a plan, the EPA is required to develop a federal implementation plan (FIP).

The most recent federally approved attainment plans for the District are the 2007 8-hour Ozone Attainment Plan and the 2012 $PM_{2.5}$ Plan for the 2006 $PM_{2.5}$ standard. The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The plan to address this standard was adopted by the District on June 16, 2016. The ARB approved the attainment demonstration plan for the San Joaquin Valley on July 21, 2016 and transmitted the plan to EPA on August 24, 2016. The plan for areas designated extreme nonattainment must demonstrate attainment of the new ozone standard by December 31, 2031. The 2016 Ozone Plan

predicts attainment of the 2008 standard by 2031. On June 30, 2020, US EPA approved portions of the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards and the San Joaquin Valley Supplement to the 2016 State Strategy for the State Implementation Plan related to the 2006 24-hour PM2.5 National Ambient Air Quality Standard (NAAQS) of 35 $\mu g/m^3$. Additionally, EPA granted an extension of the Serious area attainment date for the 2006 PM2.5 NAAQS from December 31, 2019, to December 31, 2024. Federal review of portions of the plan that pertain to the other $PM_{2.5}$ standards will continue in 2020. The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. The SJVAB is expected to be designated nonattainment for this new standard in late 2017.

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

Low-Emission Vehicle Program. The ARB 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. In 2012, ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and GHGs for new passenger vehicles.[10]

On-Road Heavy-Duty Vehicle Program. The ARB 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, as well as test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the

[10] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 26.

Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.[11]

ARB Truck and Bus Regulation. The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM 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.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low-use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[12]

Advanced Clean Truck Regulation. The Advanced Clean Trucks regulation was approved on June 25, 2020 and has two main components, a manufacturers ZEV sales requirement and a one-time reporting requirement for large entities and fleets. Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the State Implementation Plan (SIP), Sustainable Freight Action Plan, Senate Bill (SB) 350, and Assembly Bill (AB) 32.

The proposed regulation has two components including a manufacturer sales requirement, and a reporting requirement:

Zero-emission truck sales: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b – 3 truck sales, 75% of Class 4 –8 straight truck sales, and 40% of truck tractor sales.

Company and fleet reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations.

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[11] Ibid.

[12] Ibid. Page 27.

This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.[13]

ARB Regulation for In-Use Off-Road Diesel Vehicles. On July 26, 2007, the ARB adopted a regulation to reduce DPM and nitrous oxide (NO_x) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501–5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

ARB Airborne Toxic Control Measure for Asbestos. In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than 1 acre in size. These projects require the submittal of a Dust Mitigation Plan and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. The project includes no demolition. Buildings often include materials containing asbestos. Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often

[13] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 27.

contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near Laton.

Diesel Risk Reduction Plan. The ARB's Diesel Risk Reduction Plan has led to the adoption of state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[14]

<u>San Joaquin Valley Air Pollution Control District Regulations</u>

The San Joaquin Valley Air Pollution Control District (District) is responsible for controlling emissions primarily from stationary sources. The District, in coordination with eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality plans for the Air District.

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District

[14] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 28.

adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although the EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. On March 8, 2010, the EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29-million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards. On July 18, 2016, the EPA published in the Federal Register a final action determining that the San Joaquin Valley has attained the 1-hour ozone national ambient air quality standard. This determination is based on the most recent three-year period (2012-2014) of sufficient, quality-assured, and certified data. The penalty fees remain in place pending submittal of a demonstration that the San Joaquin Valley will maintain the 1-hour standard for 10 years.[15]

The EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and the EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The District's Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The ARB approved the attainment demonstration plan for the San Joaquin Valley on July 21, 2016 and transmitted the plan to EPA on August 24, 2016. The comprehensive strategy in this plan will reduce NO_x emissions by over 60 percent between 2012 and 2031, and will bring the San Joaquin Valley into attainment of the EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031. The 2016 Ozone

[15] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 29.

Plan predicts attainment of the 2008 standard by 2031.[16] To ensure that the plan is approvable with the necessary contingencies, the plan includes a "Black Box" that will require implementation of new advanced technologies and controls prior to the 2031 deadline.

The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. The new standard will require the District to prepare a new attainment to achieve the more stringent emission level within 20 years from the effective date of designation.[17]

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. The Air Basin is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet Clean Air Act requirements for the PM_{10} standard, the District adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010. The District adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Air Basin into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified NO_X and SO_2as 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 District's strategy to improve the air quality in the Air Basin. The EPA issued final approval of the 2008 $PM_{2.5}$ Plan on November 9, 2011, which became effective on January 9, 2012. The EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling,

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[16] Ibid. Page 30.

[17] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 30.

and the transportation conformity motor vehicle emissions budgets. The EPA also granted California's request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the State Implementation Plan's contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$. The ARB approved the District's 2012 $PM_{2.5}$ Plan for the 2006 standard at a public hearing on January 24, 2013.[18] This plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

The 2015 Plan for the 1997 $PM_{2.5}$ Standard approved by the District Governing Board on April 16, 2015—will bring the Valley into attainment of the EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than December 31, 2020. The plan was required to request reclassification to Serious nonattainment and to extend the attainment date from 2018 to 2020.[19]

The 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard was adopted on September 15, 2016. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment. The 2016 $PM_{2.5}$ Plan is under ARB review.[20]

The District adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018. This plan provides a combined strategy to address the EPA federal 1997 annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$; the 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$; and the 2012 annual $PM_{2.5}$ standard of 12 $\mu g/m^3$. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable.[21]

District Rules and Regulations

The District rules and regulations that may apply to the Project include, but are not limited to the following:

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[18] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 31.
[19] Ibid.
[20] Ibid.
[21] Ibid.

Rule 2201—New and Modified Stationary Source Review Rule. The review of new and modified Stationary Sources of air pollution and to provide mechanisms including emission trade-offs by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards

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. Agricultural activities are exempt from the nuisance rule.

Rule 4201—Particulate Matter Concentration. This rule shall apply to any source operation which emits or may emit dust, fumes, or total suspended particulate matter.

Rule 4309—Dryers, Dehydrators, and Ovens. The purpose of this rule is to limit emissions of oxides of nitrogen (NO_X) and carbon monoxide (CO) from dryers, dehydrators, and ovens. This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater.

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. Only compliant components are available for purchase in the San Joaquin Valley.

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. If asphalt paving will be used, then the paving operations will be subject to Rule 4641. This regulation is enforced on the asphalt provider

Rule 4702—Internal Combustion Engines. The purpose of this rule is to limit the emissions of NO_X, carbon monoxide (CO), VOC, and sulfur oxides (SO_X) from internal combustion engines.

Regulation VIII—Fugitive PM_{10} Prohibitions. This regulation is a control measure that is one main strategies from the 2006 PM_{10} for reducing the PM_{10} emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. Rule 8021 regulates construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Local Regulations

The applicable air quality goals and policies from the Fresno County General Plan are listed below.

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.4: The County shall consult with the SJVUAPCD during CEQA review for projects that require air quality impact analysis and ensure that the SJVUAPCD is on the distribution list for all CEQA documents.

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 (PM_{10}) 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.

Policy OS-G.15: The County shall work to reduce PM_{10} and $PM_{2.5}$ emissions from County-maintained roads by considering shoulder treatments for dust control as part of a road reconstruction project.

Thresholds of Significance

To determine whether a proposed Project could create a potential CEQA impact, local, state and federal agencies have developed various means by which a project's impacts may be measured and evaluated. Such means can generally be categorized as follows:

- Thresholds of significance adopted by air quality agencies to guide lead agencies in their evaluation of air quality impacts under the CEQA.
- Regulations established by air districts, CARB and EPA for the evaluation of stationary sources when applying for Authorities to Construct, Permits to Operate and other permit program requirements (e.g., New Source Review).
- Thresholds utilized to determine if a project would cause or contribute significantly to violations of the ambient air quality standards or other concentration-based limits.
- Regulations applied in areas where severe air quality problems exist.

While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the lead agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact analysis below.

Impacts and Mitigation Measures

Impact 3.2-1: *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant Impact. The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed District regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable air quality plan (AQP). An additional criterion regarding the project's implementation of control measures was assessed to provide further evidence of the project's consistency with current AQPs. This document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely

attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.

2. Will the project comply with applicable control measures in the AQPs?

The use of the criteria listed above is a standard approach for CEQA analysis of projects in the District's jurisdiction, as well as within other air districts, for the following reasons:

- Significant contribution to existing or new exceedances of the air quality standards would be inconsistent with the goal of attaining the air quality standards.
- AQP emissions inventories and attainment modeling are based on growth assumptions for the area within the air district's jurisdiction.
- AQPs rely on a set of air district-initiated control measures as well as implementation of federal and state measures to reduce emissions within their jurisdictions, with the goal of attaining the air quality standards.

AQPs are plans for reaching attainment of air quality standards. The growth assumptions, emission inventory, and control measures to reduce emissions are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards by the schedule required by the federal Clean Air Act. In order to show attainment of the standards, the District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The District then formulates a control strategy to reach attainment that includes both State and District regulations and other local programs and measures. For projects that include large stationary sources of emissions, the District relies on project compliance with Rule 2201—New and Modified Stationary Source Review to ensure that growth in stationary source emissions would not interfere with the applicable AQP. Projects exceeding the offset thresholds included in the rule are required to purchase offsets in the form of Emission Reduction Credits (ERCs).

The proposed Project uses trucks to haul incoming harvested pistachios and outgoing finished products. The applicant currently farms pistachios and utilizes an existing processing plant in Lost Hills to process the nuts. Once the Project is operational, haul trucks during harvest will travel a shorter distance than under existing conditions and outgoing shipments of finished products will travel to similar destinations as currently takes place. The overall acres of pistachios in the region may or may not increase in the future, so the Project may process some pistachios

not currently processed at an existing processing plant. Therefore, although a large portion of the emissions generated by the Project currently occurs at an existing facility, this analysis conservatively assumes that the emissions are new.

Contribution to Air Quality Violations

A measure for determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Regional air quality impacts and attainment of standards are the result of the cumulative impacts of all emission sources within the air basin. Individual projects are generally not large enough to contribute measurably to an existing violation of air quality standards. Therefore, the cumulative impact of the project is based on its cumulative contribution. Because of the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}—if project-generated emissions of either of the ozone precursor pollutants (ROG and NO_X), PM_{10}, or $PM_{2.5}$ would exceed the District's significance thresholds—then the project would be considered to contribute to violations of the applicable standards and conflict with the attainment plans.

As discussed in Impact 3.2-2 below, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the construction and operation of the Project would not exceed the District's significance thresholds. As shown in Impact 3.2-2, the Project would not result in CO hotspots that would violate CO standards. Therefore, the Project would not contribute to air quality violations.

The Project would comply with all applicable ARB and District rules and regulations outlined in the Regulatory Setting of this section. Therefore, the Project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan. Impacts are ***less than significant.***

Mitigation Measures

None are required.

Impact 3.2-2: *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Less Than Significant Impact. To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Regional Emissions

Air pollutant emissions have both regional and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to District thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from project construction and operation are addressed under Impact 3.3-3 using concentration-based District pound-per-day thresholds that determine if the project would result in a localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance at the nearest sensitive receptor location. The District AQP includes a summary of projections of all growth anticipated in the San Joaquin Valley Air Basin and controls required to meet air quality standards. This criterion is met through the AQP consistency analysis included under Impact 3.3-1.

The primary pollutants of concern during Project construction and operation are ROG, NO_X, PM_{10}, and $PM_{2.5}$. The District GAMAQI adopted in 2015 contains thresholds for CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$.

Ozone is a secondary pollutant that can be formed miles from the source of emissions, through reactions of ROG and NO_X emissions in the presence of sunlight. Therefore, ROG and NO_X are termed ozone precursors. The Air Basin often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The Air Basin also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants. The District's annual emission significance thresholds used for the project define the substantial contribution for both operational and construction emissions as follows:

- 100 tons per year CO
- 10 tons per year NO_X
- 10 tons per year ROG
- 27 tons per year SO_X
- 15 tons per year PM_{10}
- 15 tons per year $PM_{2.5}$

The proposed Project does not contain sources that would produce substantial quantities of SO_2 emissions during construction and operation. Modeling conducted for the Project show that SO_2 emissions are well below the District GAMAQI thresholds, as shown in the modeling results contained in Appendix A. No further analysis of SO_2 is required.

Construction Emissions

Construction emissions associated with the project are provided in Table 3.3-5. The emissions from construction activities were compared with the significance threshold and all modeling assumptions are provided in Appendix A. As demonstrated in Table 3.3-5, the emissions are below the significance thresholds. Therefore, the emissions would be less than significant on a project basis. Although the proposed Project does not exceed the threshold, a mitigation measure has been added to ensure that the Project complies with District Regulation VIII Fugitive PM10 Prohibitions provisions that apply to the Project including, but not limited to, preparing a Dust Control Plan (DCP).

Table 3.3-5
Construction Air Pollutant Emissions (Annual)[22]

Year	Emissions (tons per year)				
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2021	1.00	2.77	2.43	0.96	0.29
Highest Year of Project Construction Emissions	**1.00**	**2.77**	**2.43**	**0.96**	**0.29**
Significance threshold (tons/year)	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII—Fugitive PM_{10} Prohibitions.
ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Calculations use unrounded numbers.

[22] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 78.

Operational Emissions (Non-Permitted)

Operational emissions occur over the lifetime of the project and are primarily from on-road and off-road mobile sources. The largest source is truck emissions. Trucks would be used to provide liquified natural gas (LNG) during the first year of operations. The Project is expected to be completed in 2021 and would commence operations during the 2021 harvest season. The District considers permitted and non-permitted emission sources separately when making significance determinations. In addition, the annual operational emissions are also considered separately from construction emissions.

The emissions modeling results for project operation are summarized in Table 3.3-6. Modeling results are provided in Appendix A and all modeling assumptions are also provided in Appendix A. As demonstrated in Table 3.3-6, the operational emissions do not exceed the District significance thresholds for any criteria pollutant and, therefore, would result in a less than significant impact.

Table 3.3-6
Operational Air Pollutant Emissions (2021)[23]

Source	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	1.30	0.00	0.00	0.00	0.00
Energy (Natural Gas)	0.02	0.18	0.15	0.01	0.01
Mobile (employee and visitor)	0.04	0.12	1.15	0.47	0.13
Mobile (Maintenance/Delivery Trucks)	0.01	0.15	0.10	0.03	0.01
Mobile (Truck)	0.11	3.58	0.54	0.29	0.09
Mobile (LNG Haul Trucks—First Year Only)	0.01	0.06	0.01	0.01	0.00
Mobile (Propane Forklifts and Yard Trucks)	0.06	0.28	3.27	0.04	0.01
Total	**1.55**	**4.37**	**5.22**	**0.85**	**0.25**
Significance threshold	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Area source emissions include emissions from natural gas, and landscape.

[23] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 78-79.

Operational Permitted Emissions

The District GAMAQI recommends assessing the emissions from permitted sources of emissions separate from non-permitted sources. The District's permitting process ensures that emissions of criteria pollutants from permitted equipment and activities at stationary sources are reduced or mitigated to below the District's thresholds of significance. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors. Permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must, in general, offset all emission increases in excess of the thresholds.

The Project will include stationary sources that require District permits. The Project includes 13 natural gas column dryers used to dry the pistachios. Nut warming and roasting equipment will be installed in the processing building to prepare finished products for sale. Based on the analysis prepared for the equipment, the emissions exceed the Rule 2201 NSR offset thresholds for NOx and will be required to provide offsets to reduce emissions below the threshold or implement additional emission controls to reduce emissions. The District will prepare an engineering evaluation of all permitted equipment to determine the controls required to achieve BACT requirements. The permitted emissions and the quantity of offsets required are dependent on the control technology selected and any process limits included in the permit conditions.

The Project will also include processes that generate fugitive dust during the handling of the pistachios. Fugitive dust will be controlled by venting dusty processes to bag houses and fabric filters. Sufficient detail regarding the process were not available to estimate the amount of fugitive dust emissions, but the Project will be required to comply with BACT requirements.

Operational permitted emissions at full operation are presented in Table 3.3-7. The Project stationary sources would exceed District thresholds of significance for NOx; therefore, the Project's estimated permitted emissions would be potentially significant prior to compliance with District's NSR offset requirements.

Table 3.3-7
Operational Permitted Air Pollutant Emissions (2021)[24]

Source	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Natural Gas Fueled Column Dryers	0.55	12.1	3.05	0.41	0.41
Natural Gas Warmer and Roaster	0.05	1.09	0.28	0.04	0.04
Diesel Emergency Generator (170 hp)	0.002	0.037	0.001	0.0003	0.0003
Total	**0.60**	**13.22**	**3.34**	**0.44**	**0.44**
Significance threshold	10	10	100	15	15
Exceed threshold—potentially significant impact?	No	Yes	No	No	No
NSR offsets required	—	3.22	—	—	—
Significant after applying offsets?	No	No	—	—	—
Notes: ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter					

Compliance with Rule 2201 permitting and offset provisions is required; therefore, Project stationary source emissions would be reduced to less than significant levels; however, Mitigation Measure AIR-1 has been included to ensure less than significant impacts.

Project Health Impacts

In the California Supreme Court opinion *Sierra Club v. County of Fresno* ((2018) 6 Cal. 5th 502), the Court found the project EIR deficient because it did not identify specific health related effects resulting from the estimated amount of pollutants generated by the project. The ruling stated that the EIR should give a "sense of the nature and magnitude of the 'health and safety problems' caused by a project's air pollution. The EIR should translate the emission numbers into adverse impacts or to understand why such translation is not possible at this time (and what limited translation is, in fact, possible)."

The standard measure of the severity of impact is the concentration of pollutant in the atmosphere compared to the ambient air quality standard for the pollutant for a specified period of time. The severity of the impact increases with the concentration and the amount of time that people are

[24] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 80.

exposed to the pollutant. The change in health impacts with concentration is described in Table 3.3-2 and Table 3.3-3. The pollutants of concern in the Friant Ranch ruling were regional criteria pollutants ozone, and PM_{10}. It is important to note that the potential for localized impacts can be addressed through dispersion modeling. The District includes screening criteria that if exceeded would require dispersion modeling to determine if project emissions would result in a significant health impact. For this Project, no significant localized health impacts would occur. Regional pollutants require more complex modeling as described below.

Ozone concentrations are estimated using regional photochemical models because ozone formation is subject to temperature, inversion strength, sunlight, emissions transport over long distances, dispersion, and the regional nature of the precursor emissions. The emissions from individual projects are too small to produce a measurable change in ozone concentrations—it is the cumulative contribution of emissions from existing and new development that is accounted for in the photochemical model. Ozone concentrations vary widely throughout the day and year even with the same amount of daily emissions. The District indicated in an Amicus Brief on Friant Ranch that running the photochemical model with just Friant Ranch emissions (109.5 tons/year NO_X) is not likely to yield valid information given the relative scale involved. A copy of the District brief is included in Appendix A. The NO_X inventory for the San Joaquin Valley is 224 tons per day in 2019 or 81,760 tons per year. Friant Ranch would result in 0.13 percent increase in NO_X emissions. A project emitting at the District CEQA threshold of 10 tons per year would result in a 0.01 percent increase in NO_X emissions. Most project emissions are generated by motor vehicle travel distributed on regional roadways miles from the project site, and these emissions are not conducive to project-level modeling.

Emissions throughout the San Joaquin Valley are projected to markedly decline in the coming decade. The District 2016 Ozone Plan predicts NO_X emissions will decline to 103 tons per day by 2029 or 54 percent from 2019 levels through implementation of control measures included in the plan. This means that ozone health impacts to residents of the San Joaquin Valley will be lower than currently experienced and most areas of the San Joaquin Valley will have attained ozone air quality standards. The plan accounts for growth in population at rates projected by the State of California for the San Joaquin Valley, so only cumulative projects that would exceed regional growth projections would potentially delay attainment and prolong the time and the number of people would experience health impacts. It is unlikely that anyone would experience greater impacts from regional emissions than currently occur. The federal transportation conformity regulation provides a means of ensuring growth in emissions does not exceed emission budgets for each County. Regional Transportation Plans and Regional Transportation Improvement Plans

must provide a conformity analysis based on the latest planning assumptions that demonstrates that budgets will be not be exceeded. If budgets are exceeded, the San Joaquin Valley may be subject to Clean Air Act sanctions until the deficiency is addressed.

Particulate emission impacts can be localized and regional. Particulates can be directly emitted and can be formed in the atmosphere with chemical reactions. Small directly emitted particles such as diesel emissions and other combustion emissions can remain in the atmosphere for a long time and can be transported over long distances. Large particles such as fugitive dust tend to be deposited a short distance from where emitted but can also travel long distances during periods of high winds. Particulates can be washed out of the atmosphere by rain and deposited on surfaces. Secondary particulates formed in the atmosphere such as ammonium nitrate require NO_X and ammonia, and they require low inversion levels and certain ranges of temperature and humidity to result in substantial concentrations. These complications make modeling project particulate emissions to determine concentration feasible only for directly emitted particles at receptor locations close to the project site. Regional particulate concentrations are modeled using a gridded inventory (emissions in tons/day are placed a 4-kilometer, three-dimensional grid to spatially allocate the emissions geographically and vertically in the atmosphere) and an atmospheric chemistry component to simulate the chemical reactions. The model uses relative reduction factors to determine the amount of reductions of each PM component be needed to attain the air quality standards on the days with the conditions most favorable to high particulate concentrations. Projects with emissions below the District thresholds of significance would not produce sufficient emissions to determine a project's individual contribution to the particulate concentration.

Cumulative Health Impacts

The Air Basin is in nonattainment for ozone, PM_{10} (State only), and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 1 of Appendix A. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

Since the Basin is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the Project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The District regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would have a cumulatively considerable health impact. As shown in Tables 3.3-5 through 3.3-7 the regional analysis of construction and operational emissions indicates that the Project would not exceed the District's significance thresholds and the Project is consistent with the applicable Air Quality Attainment Plan. Therefore, the Project would not result in significant cumulative health impacts.

The Districts Air Quality Attainment Plans predict that nonattainment pollutant emissions will continue to decline each year as regulations adopted to reduce these emissions are implemented, accounting for growth projected for the region. Therefore, the cumulative health impact will also decline even with the Project's emission contribution.

The proposed Project does not exceed District quantitative thresholds of significance for any pollutant: however, Mitigation Measures AIR-1 and AIR-2 have been included to help ensure compliance with District regulations that reduce project emissions during construction and operation. Impacts are ***less than significant***.

Mitigation Measures

AIR-1 Prior to commencing construction activities, the Project shall prepare a Dust Control Plan as required by San Joaquin Valley Air Pollution Control District (District) Rule 8021 to control fugitive dust sufficiently to limit visible dust emissions to 20 percent opacity during construction, excavation, or earthmoving activities.

AIR-2 Prior to installing equipment requiring a District permit to operate, the applicant shall file an Authority to Construct application with the District that complies with the requirements of Rule 2201 New and Modified Stationary Source Review. Emissions of any criteria pollutant that exceed the District offset thresholds after the implementation of best available control technology (BACT) shall provide emission offsets in amounts required by the rule.

Impact 3.2-3: *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant Impact. Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest sensitive receptors are at residences located one mile west of the Project site on W. Kamm Avenue.

Localized Pollutant Analysis

Emissions occurring at or near the Project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard.

The District's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures would require additional analysis to determine if the preparation of an ambient air quality analysis is needed. The criteria pollutants of concern for localized impact in the SJVAB are PM_{10}, $PM_{2.5}$, NO_x, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only.

An analysis of maximum daily emissions during construction and operation was conducted to determine if Project emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily construction emissions would occur in 2021. The maximum daily operational emissions would occur at project buildout, which was assumed to occur in 2021. Operational emissions include those generated on-site by area sources such as consumer products, and landscape maintenance, energy use from natural gas combustion, and motor vehicles operation at the project site. Motor vehicle emissions are estimated for on-site operations within 0.5 mile of the site. The results of the construction screening analysis are presented in Table 3.3-8.

Table 3.3-8
Maximum Daily Air Pollutant Emissions during Construction (Unmitigated)[25]

Maximum Daily Emissions	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions (2021)	93.40	46.47	37.17	14.59	4.88
Screening threshold	100	100	100	100	100
Exceed screening threshold?	NA	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter N/A = Not applicable
Summer emissions were used except for NO_X, which are higher in winter. PM is from the mitigated run, which accounts for compliance with Regulation VIII dust control measures. There is no ambient air quality standard for ROG.

The proposed Project would not exceed the emission screening thresholds during project construction. Therefore, no dispersion modeling is required to ensure that localized construction impacts would be less than significant.

The maximum daily operational emissions are provided in Table 3.3-9. The largest source of daily emissions is diesel trucks accessing the site, yard trucks and tractors used to position the trailers once on-site.

Table 3.3-9
Maximum Daily Air Pollutant Emissions during Operations (2021)[26]

Maximum Daily Emissions	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	7.15	0.00	0.03	0.00	0.00
Energy (natural gas)	0.11	1.00	0.83	0.08	0.08
Mobile (Emp. and Visitor)	0.32	0.08	0.98	0.08	0.02
Mobile (Maintenance and Delivery Trucks)	0.01	0.02	0.03	0.00	0.00
Mobile (Truck)	0.65	35.53	2.39	0.17	0.06
Mobile (LNG Trucks Year 1 Only)	0.01	0.29	0.05	0.03	0.01
Off-Road Forklifts and Yard Trucks	6.7	41.06	77.45	3.14	3.14
Maximum Daily Operational Emissions	**14.94**	**77.98**	**81.76**	**3.50**	**3.31**

[25] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 84.

[26] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 84-85.

Maximum Daily Emissions	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Screening threshold	—	100	100	100	100
Exceed screening threshold?	N/A	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter N/A = Not applicable
Summer emissions were higher for ROG. Winter emissions were higher for NO_X, CO, PM_{10}, and $PM_{2.5}$.
There is no ambient air quality standard for ROG.

The Project would not exceed District screening thresholds for localized criteria pollutant impacts; therefore, the Project's localized criteria pollutant impacts would be less than significant.

Carbon Monoxide Hot Spot Analysis

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The District provides screening criteria to determine when to quantify local CO concentrations based on impacts to the level of service (LOS) of intersections in the project vicinity.

Project construction would result in minor increases in traffic for the surrounding road network during the duration of construction. Motor vehicles accessing the site when it becomes operational would result in a minor increase in daily trips that would not substantially reduce the LOS. The Project is located in a rural location with very low traffic volumes. No congested conditions that would result in a CO hotspot are possible. In addition, the highest background 8-hour average of carbon monoxide during the latest year CO was monitored is 2.06 ppm, which is 78 percent lower than the state ambient air quality standard of 9.0 ppm. Therefore, the Project would not significantly contribute to an exceedance of state or federal CO standards.

Construction: Toxic Air Contaminants

Project construction would involve the use of diesel-fueled vehicles and equipment that emit DPM, which is considered a TAC. The District's latest threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in a million (formerly 10 in a million). The District's 2015 GAMAQI does not currently recommend analysis of TAC emissions from project construction activities, but instead focuses on projects with operational emissions that would expose sensitive receptors over a typical lifetime of 70 years. In addition, most of the Project's construction emissions would occur during site preparation and grading phases over a 40-day period. Building construction, silo assembly, and equipment installation require limited amounts of diesel equipment. The site is located 1,656 meters (5,433 feet) from the

nearest sensitive receptor, a distance at which no significant impact from the construction activities is possible.

Operation: Toxic Air Contaminants

The District recommends preparation of a screening analysis using its health risk prioritization tool to estimate the impacts of TAC emissions on sensitive receptors. The Project will generate TAC emissions from truck travel and idling on the Project site for incoming pistachios during the harvest season and delivery of finished products during the remainder of the year. The Project uses natural gas for its dryers. Natural gas has a relatively low level of toxicity. The nearest sensitive receptor is located 1,656 meters (5,433 feet) from the Project site. At this distance, the TAC emissions have dispersed to the point that concentrations and health risk are low. The project will use LNG hauled to the Project by trucks in the first year of operations only. Cancer risk is based on a 70-year impact; therefore, the emissions from the LNG haul trucks for one year would not add significantly to the risk screening score.

The results of the screening analysis presented in Table 3.3-10 show that the total risk score is well below the District threshold for requiring a health risk assessment using dispersion modeling. The screening tool provides results at incremental distances from the source of emissions to the receptor. The risk from each source was added together to determine the total risk for the entire Project. The screening tool spreadsheets and the modeling assumptions used in the analysis are provided in Appendix A.

Table 3.3-10
Prioritization Tool Health Risk Screening Results[27]

Impact Source	Risk Screening Score	Chronic Risk Score	Acute Risk Score
Diesel Truck and Tractors	0.131	0.0004	0
Emergency Diesel Generator (170 HP)	0.0024	0.0003	0
Natural Gas Column Dryers	0.0015	0.0002	0.0001
Natural Gas Warmer and Roaster	0.0002	0.0000	0.0001
Total Risk from Project	**0.1351**	**0.0009**	**0.0001**
Screening Risk Score Threshold	10	1	1
Significance Threshold (Cancer Risk)	20	1	1

[27] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 86.

The Project would not exceed the cancer risk, chronic risk, and acute risk screening threshold levels. The primary source of the emissions responsible for chronic risk are from diesel trucks. The primary source of acute risk is from natural gas combustion in the dryers and roaster. DPM does not have an acute risk factor. Since the Project does not exceed Project screening thresholds for cancer risk, acute risk, or chronic risk, this impact would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley fever. By geographic region, hospitalizations for Valley fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died.[28] California experienced 7,466 new cases of Valley fever in 2017. A total of 275 Valley fever cases were reported in Fresno County in 2017 for a rate of 82.4 per 100,000 people.[29]

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils

[28] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 86-87.
[29] Ibid, page 87.

4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
8) Sandy, well-aerated soil with relatively high water-holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g. grassy lawns)
3) Higher elevations (above 7,000 feet)
4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms
8) Heavily urbanized areas where there is little undisturbed virgin soil.[30]

The Project site is situated on previously disturbed farmland that does not provide suitable habitat for the spores. Therefore, Project implementation would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil.

Although conditions are not favorable, construction activities could generate fugitive dust that contain *C. immitis* spores. The Project will minimize the generation of fugitive dust during construction activities by complying with the District's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be relatively small, because most of the project area would be occupied by buildings, gravel surfaces, and pavement. This condition would lessen the possibility of the Project from providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

<u>Naturally Occurring Asbestos</u>

Review of the map of areas where naturally occurring asbestos in California are likely to occur[31] found no such areas in the project area. Therefore, development of the Project is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant.

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[30] Ibid. Page 87.
[31] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 88.

Any impacts would be ***less than significant***.

Mitigation Measures

None Required.

Impact 3.2-4: *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less Than Significant. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

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 Project is of the first type since it involves a new odor source. The screening levels for land use types are provided in Table 3.3-11.

Table 3.3-11
Screening Levels for Potential Odor Sources[32]

Odor Generator	Screening 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

[32] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 89.

The Project is within an agricultural area where the use of diesel equipment is common and accepted as part of the existing environment. Although the Project is a food processing facility, the hulling and drying of pistachios are not likely to generate objectionable odors. The Project could generate odors from operation of diesel trucks and equipment on the Project site; however, the site is over one mile from the nearest sensitive receptor and as such, is beyond the one-mile screening distance recommended for food processing facilities. Therefore, the Project would not expose substantial numbers of people to objectionable odors.

During construction, various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and would not likely be noticeable for extended periods of time beyond the Project's site boundaries. The potential for odor impacts would therefore be ***less than significant.***

Mitigation Measures

None Required.

Cumulative Impacts:

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to air quality resources is the San Joaquin Valley Air Basin. Although the proposed Project would generate emissions, as discussed in the previous section, air quality impacts due to construction and operational emissions would fall below established significant thresholds with mitigation incorporated.

The proposed Project is located in a rural area, miles away from the nearest populated area that has other stationary or mobile emission sources. The unincorporated community of Three Rocks, a U.S. Census designated place with a population of approximately 250, is closest populated area and is located approximately 1.5 miles to the south of the KAPP facility's primary pistachio hulling and processing equipment. The emissions from the proposed Project operations are not expected to be cumulatively significant because they do not exceed established thresholds and because of the distance between the proposed Project site and other existing or potential future emission sources or other projects. As such, cumulative impacts are considered ***less than cumulatively considerable***.

3.4 Biological Resources

This section of the DEIR addresses the biological resources present within the proposed Project area. The section includes a discussion of the special-status species that may potentially occur within the proposed Project area as well as any sensitive habitats in the area. It also recognizes the potential impacts of implementing the proposed Project on such resources and identifies mitigation measures, where appropriate. No NOP comment letters were received pertaining to this topic. The information and analysis presented in this Section are based on the desktop review and reconnaissance site survey conducted by Quad Knopf, Inc. (QK). The full biological evaluation and a description of the Biological Study Area (BSA) used in the evaluation is provided in Appendix B.

Environmental Setting

The Project site is within a region with a Mediterranean climate of hot summers and mild, wet winters. Average high temperatures range from 54.1° Fahrenheit (F) in January to 98°F in July, but it is not uncommon for temperatures to exceed 100°F in the summer. Average low temperatures range from 38.4°F in December to 63.7°F in July. Precipitation occurs primarily as rain, most of which falls from November to April, with an average of 5.78 inches of rainfall per year. Precipitation may also occur as dense fog during the winter known as Tule fog. Rain rarely falls during the summer months.[1]

Project site topography is relatively flat, varying in elevation from 515 to 650 feet above mean sea level, with the lowest elevation occurring within the Processing Plant Site and the highest elevation occurring along the most western portion of natural gas pipeline Alternative Route A.

The Project site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. No shrubs, trees or jurisdictional wetlands or waters are located on the Project site. In late 2019, grading, excavation, foundation installation, crushed asphalt deposition and the placement of two storage silos and other structures occurred, primarily within the northern 80 acres of APN 038-300-17S. Thus, the environmental baseline for evaluating potential Project impacts is June 1, 2019, which is prior to the development of existing improvements on the site.

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[1] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 4-1.

The Project area is within the Tumey Gulch-Fresno Slough watershed which drains water from the Ciervo Hills towards the Fresno Slough near Mendota.[2] Six waterways designated by the U.S. Geological Survey (USGS) in the National Hydrography Dataset (NHD) as intermittent streams occur within the BSA (Figure 4-2 of Appendix B). Three of these originate in the Diablo Range foothills and intersect or drain into the BSA in the western portion of the Project. The remaining three are in the eastern portion of the Project; two of these intersect the Project site in a north-to-south direction and the other is present within the BSA to the east of the Project site. These three features are artificial drainages and do not connect to any other waterways. Ten wetland features including six Riverine features (R4SBA and R4SBC) and four Freshwater Ponds (PUBFx, PUSAx, and PUSCx) were identified within the BSA (see Figure 4-2 of Appendix B). None of these features, except one, were present on the Project site, presumably because of land surface manipulation related to agricultural conversion.

Desktop Review

The following sources were reviewed for information on sensitive biological resources in the Project vicinity:[3]

- California Department of Fish & Wildlife (CDFW) California Natural Diversity Database (CNDDB)
- CDFW Biogeographic Information and Observation System
- CDFW Special Animals List
- CDFW California Wildlife Habitat Relationships (CWHR) System
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California
- U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation system
- USFWS Critical Habitat Mapper
- USFWS National Wetlands Inventory
- USGS National Hydrography Dataset
- Federal Emergency Management Agency (FEMA) flood zone maps
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey
- NRCS List of Hydric Soils

[2] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 4-4.

[3] Ibid. Page 2-3.

- Current and historical aerial imagery
- Topographic maps

For each of these data sources, the search was focused on the Levis and Lillis Ranch USGS 7.5-minute quadrangles in which the Project is located, plus the surrounding ten quadrangles including Chaney Ranch, Coit Ranch, Tranquillity, Monocline Ridge, Cantua Creek, Ciervo Mountain, Tres Picos Farms, Santa Rita Peak, Joaquin Rocks, and Domengine Ranch. For the CNDDB query, a 10-mile search radius was used.

The CNDDB provides element-specific spatial information on individually documented occurrences of special-status species and sensitive natural communities. Some of the information available for review in the CNDDB is still undergoing review by the CDFW; these records are identified as unprocessed data. The CNPS database provides similar information as the CNDDB, but at a much lower spatial resolution. Much of this information in these databases is submitted opportunistically and is often focused on protected lands or on lands where various developments have been proposed. Neither database represents data collected during comprehensive surveys for special-status resources in the region. As such, the absence of recorded occurrences in these databases at any specific location does not preclude the possibility that a special-status species could be present. The National Wetlands Inventory (NWI), NHD, and Web Soil Survey provide comprehensive data, but at a low resolution that requires confirmation in the field. The CDFW Special Animals List and USFWS Information for Planning and Consultation system provide no spatial data on wildlife occurrences and provide only lists of species that might potentially be present.

The results of database inquiries were reviewed to develop a comprehensive list of sensitive biological resources that may be present in the vicinity of the Project. This list was then evaluated against existing conditions observed during the site visit of the BSA to determine which sensitive resources are or could be present, and then the potential for impacts to those resources to occur from Project implementation.

<u>Field Surveys</u>

Reconnaissance Level

A reconnaissance survey was conducted in July 2020 over the BSA which consists of the Project site (Processing Plant Site, Water Settling and Cleaning Pond Site, and Solid Materials Management Site), a natural gas service line extension consisting of three alternative routes

Natural Gas Service Line Routes A-C), the Land Application Area consisting of approximately 2,556 acres of orchards where process water from the Project will be reused for irrigation, and a surrounding 500-foot buffer (see Figure 3.4-1). General tasks completed during the survey included developing an inventory of plant and wildlife species, characterizing vegetation associations and habitat conditions within the BSA, assessing the potential for federally- and State- listed and other special-status plant and wildlife species to occur on and near the Project, and assessing the potential for migratory birds and raptors to nest on and near the Project. In addition, all historical wetland and water features documented by NWI and NHD were visit and verified.

Focused Field Surveys

To evaluate the presence/absence of certain high-profile species that are known to occur in the Project region, focused field surveys were conducted. Focused surveys were conducted for the San Joaquin kit fox (*Vulpes macrotis mutica*), special-status small mammals, special-status bat species and bat maternity colonies, and nesting migratory birds and raptors including Swainson's hawk (*Buteo swainsoni*). The potential for presence/absence of other special-status species such as the American badger (*Taxidea taxus*) and western burrowing owl (*Athene cunicularia*) was evaluated using a combination of surveys conducted including the on-site field evaluation effort and focused surveys for other species. Further focused field survey information is presented in Appendix B.

Observed Habitat Types

Four habitat types were observed within the BSA: annual grassland, dryland grain crops, deciduous orchard, and urban. Habitats were characterized following the CWHR. A complete list of plant and animal species observed is presented in Appendix B.

Annual Grassland. Annual grassland is described by Mayer & Laudenslayer[4] as open grasslands composed primarily of annual plant species, which also will occur as understory plants in woodland habitats. Habitat structure is dependent largely on weather patterns and livestock grazing. Large quantities of dead plant material may accumulate in summer months. Plant species of this habitat include introduced annual grasses such as brome (*Bromus sp*.) and wild oats (*Avena sp*.), and forbs such as filaree (*Erodium sp*.) and turkey mullein (*Croton setigerus*).

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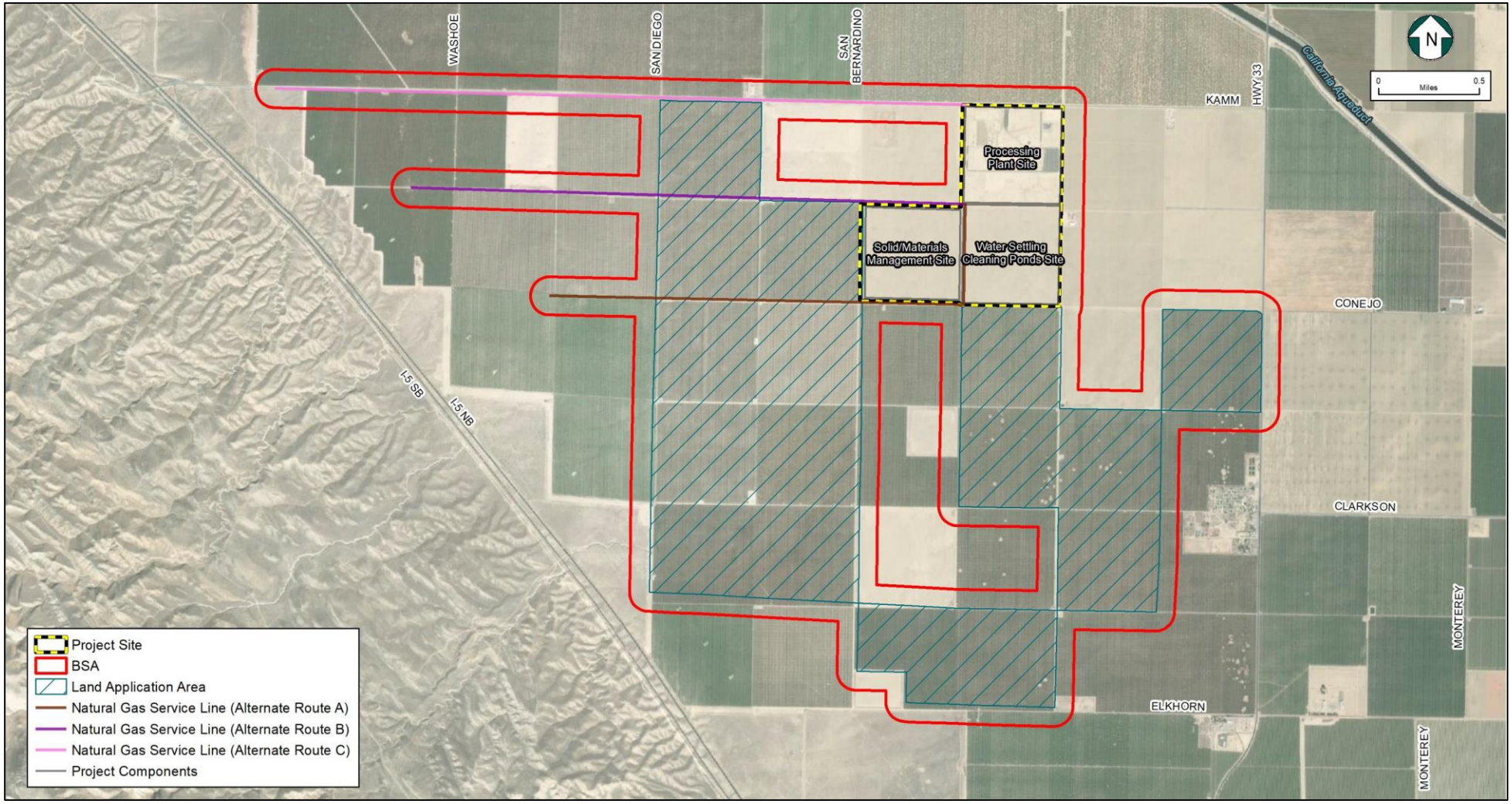
[4] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 4-6.

Figure 3.4-1
Biological Study Area Map[5]



[5] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. See Appendix B. Page 2-2.

Many wildlife species use annual grassland habitat for foraging, but some require special habitat features such as cliffs, ponds, and woodlands for breeding and refuge. Characteristic species of annual grasslands include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus oreganus*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), turkey vulture (*Cathartes aura*), burrowing owl, and horned lark (*Eremophila alpestris*).

Annual grassland habitat was present to the west and south of the BSA, but grassland habitat within the BSA was present on only 68.15 acres. Within the BSA, these grassland areas were present within the western most portion of Natural Gas Service Line Route C and in areas to the south and southwest of the Land Application Area. This annual grassland was dominated by red brome and foxtail barley (*Hordeum murinum*) with a few isolated allscale saltbush (*Atriplex polycarpa*) shrubs. A complete list of plant species is included in Appendix B.

Deciduous Orchard. Mayer and Laudenslayer[6] describe deciduous orchards as typically open, single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Deciduous orchards include trees such as almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecans, pistachios, plums, pomegranates, prunes, and walnuts.

Trees range in height at maturity for many species from 15 to 30 feet but may be 10 feet or less for some species (pomegranates and some dwarf varieties) or 60 feet or more (pecans and walnuts). Crowns usually touch and are usually in a linear pattern. Spacing between the trunks of trees is uniform depending on desired spread of mature trees. The understory is often managed to prevent understory growth and is composed of bare ground, or is composed of low-growing grasses, legumes, and other herbaceous plants. Wildlife such as deer and rabbit browse on the trees; other wildlife such as squirrels and birds feed on fruit or nuts. Some wildlife (e.g. mourning dove [*Zenaida macroura*] and California quail [*Callipepla californica*]) may use this habitat for cover and nesting.

Deciduous orchard occurs throughout a large portion of the BSA and encompasses approximately 3,641 acres. The orchards were mostly pistachio trees and some, particularly in the south, were almond trees.

Dryland Grain Crops. Mayer and Laudenslayer[7] describe dryland grain crop habitat as non-irrigated grain and seed crops that includes seed producing grasses, primarily barley, cereal rye,

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[6] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 4-10.
[7] Ibid.

oats, and wheat. These seed and grain crops are annuals. Dryland grain and seed crops do not conform to normal habitat stages. Instead, these crops are regulated by the crop cycle in California. In many areas of the State a dryland crop is grown one year, then the land may be fallowed (not planted) for one or more years. The grain stubble and fallowed land may be grazed by livestock. If fallowed, volunteer native or naturalized herbaceous species grow. Many species of rodents and birds have adapted to croplands. Hawks, owls, and other predators feed on the rodents in these areas. Deer, elk, antelope, and wild pigs may forage in grain fields.

Dryland grain crop habitat within the BSA encompasses approximately 947.56 acres and is present within the Project site including the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, and areas intermixed with orchards in the northern and central portion of the Project. Mostly, these areas were recently disked and without substantial vegetative cover at the time of the site investigations.

Urban. Mayer and Laudenslayer[8] describe urban habitat as variable with five vegetative structures defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. These structures vary based on the associated urban development. Vegetation commonly associated with urban habitat includes ornamental herbs (grass lawns, weeds, and flowers), shrubs, hedges, and trees, as well as ruderal species.

Urban habitat within the BSA encompasses approximately 31.45 acres and consisted of mostly of farm maintenance and operations facilities, and paved roads such as Kamm Avenue. The most obvious of the facilities is along Kamm Avenue at Riverside Drive, but other smaller and less obvious farm-related facilities are scattered within the orchards.

Special Status Species

Special Status Plant Species

The literature and database review identified 48 special-status plant species known or with potential to occur in the vicinity of the Project and a full list is provided in Appendix B. Of those, 24 special status plant species were eliminated from consideration because the Project occurs outside of the species known range, outside of the elevation range of the species, or because habitat that could support the species was absent from the BSA. There were 24 special-status plant species determined to have potential to occur within the BSA. However, upon evaluating existing site conditions it was determined that none of those species are likely to occur within the BSA,

[8] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 4-11.

and even more certainly, none of those species would occur within the Project footprint because of the extreme level of disturbance that has occurred. Intensive agricultural operations would effectively eliminate the possibility of these species from the Project footprint, except perhaps in the extreme western edge of Natural Gas Service Line Route C. In that area, the pipeline would be installed along the ROW south of Kamm Avenue where extensive shoulder maintenance would likely preclude these species from occurring. At this location there is a potential that construction activities could encroach into adjacent annual grassland habitat, especially at the point of connection with the existing pipeline.

Special Status Animal Species

The literature and database review identified 45 special-status wildlife species known or with potential to occur in the vicinity of the Project and a full list is provided in Appendix B. Of those, 21 were determined to have a potential to occur within the BSA but only 15 of these species are further discussed. The other six species were included in the CDFW's Special Animals List and have no special protection.

Western Spadefoot (State Species of Special Concern). The western spadefoot is a relatively common amphibian found throughout most of the Central Valley and adjacent foothills. The spadefoot is found in grasslands but can also be found in the valley and foothill hardwood woodlands. Shallow temporary pools are optimal habitats for breeding and egg laying. There was one CNDDB record within 10 miles of the Project. This record (EONDX 114265) was documented approximately 5.6 miles to the northwest of the BSA and documented hundreds of spadefoot tadpoles in a basin located in an agricultural area.[9]

California Glossy Snake (State Species of Special Concern). The California glossy snake is common throughout California, especially in desert habitats but also chaparral, sagebrush, valley and foothill hardwood, pine-juniper woodland, and annual grassland. There is one CNDDB record of this species (EONDX 104888) that occurs approximately 4.29 miles west of the BSA. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the south and west of the western most portion of Natural Gas Service Line Route C and to the south and southwest of the Land Application Area. This grassland habitat has been disturbed and is regularly managed by grazing. There is no habitat

[9] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 9-4.

on the Project that would support this species, except along the previously mentioned areas to the south and west of the westernmost portion of Natural Gas Service Line Route C. [10]

Blunt-nosed Leopard Lizard (Federally Endangered, State Endangered, State Fully Protected). The blunt-nosed leopard lizard occupies sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief. There were three CNDDB records within 10 miles of the Project. Two of these records (EONDX 27782 and 27714) were documented in 1960 and 1979 and are overlapping the Project along the proposed natural gas service Routes B and C. There is no specific information provided with these records. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the west of the Project. There is habitat that could support this species south and west of Natural Gas Service Line Route C and to the south and southwest of the Land Application Area. This grassland habitat has been disturbed and is regularly managed by grazing.[11]

Coast Horned Lizard (State Species of Special Concern). The coast horned lizard occupies open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains. It is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. It often inhabits lowlands along sandy washes with scattered shrubs and habitat along dirt roads and near ant hills. There are two CNDDB records of this species within 10 miles of the BSA. The closest (EONDX 34859) is located approximately 3.93 miles to the northwest of the BSA. There is no specific information provided with these records. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the west of the Project. There is habitat that could support this species south and west of Natural Gas Service Line Route C and to the south and southwest of the Land Application Area. This grassland habitat has been disturbed and is regularly managed by grazing. [12]

San Joaquin Coachwhip (State Species of Special Concern). The San Joaquin coachwhip occurs in open, dry, treeless areas, including grassland and saltbush scrub and takes refuge in rodent burrows, under shaded vegetation, and under surface objects. There was one CNDDB record within 10 miles of the Project. This record (EONDX 66159) was of a male adult coachwhip

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[10] Ibid. Page 5-5.

[11] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-5.

[12] Ibid. Page 5-7.

that was documented approximately 4.2 miles to the west of the BSA. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the south and west of the western most portion of Natural Gas Service Line Route C and to the south and southwest of the Land Application Area. This grassland habitat has been disturbed and is regularly managed by grazing. [13]

Western Burrowing Owl (State Species of Special Concern). The western burrowing owl is a small ground-dwelling owl that is found throughout western North America. This species occupies a variety of habitat types including grassland, shrub steppe, desert, natural prairie, agricultural areas (including pastures, untilled margins of cropland, and irrigation canals), earthen levees and berms, ruderal, grassy fields, pastures, coastal uplands, and urban vacant lots as well as the margins of airports, golf courses, and roads. Burrowing owls use earthen burrows, typically relying on other fossorial mammals to construct their burrows. Five CNDDB occurrences of western burrowing owl were documented within 10 miles of the Project. The nearest CNDDB record (EONDX 3616) of this species was documented one adult near a roadside approximately 7.3 miles northwest of the BSA. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the south and west of the Natural Gas Service Line Route C and in the grassland habitat to the south and southwest of the Land Application Area. Though this grassland habitat has been disturbed and regularly maintained by grazing, it could potentially support nesting and foraging burrowing owls. [14]

Swainson's Hawk (State Threatened). Swainson's hawks occur in grassland, desert, and agricultural landscapes in the Central Valley and Antelope Valley of California. Some hawks may be residents, especially in the southern portion of their range, while others may migrate between wintering habitat in Central and South America and breeding habitats in North America. Three CNDDB records of Swainson's hawk occurrences were documented within 10 miles of the Project. The nearest record (EONDX 90996) of this species was approximately 6.9 miles south of the BSA in cottonwood trees along Cantua Creek. There are no potential nesting sites on the Project but there are potential nesting sites within 0.5 mile of the site. No

[13] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-7.

[14] Ibid. Page 5-8.

Swainson's hawks were found during a search of those nests. Three Swainson's hawks were observed overflying the BSA and one was observed south of the BSA within 0.5-mile buffer.[15]

Mountain Plover (State Species of Special Concern). The Mountain plover inhabits open, arid, sparsely vegetated short-grass plains and fields, plowed fields, rolling hills, and deserts. In the San Joaquin Valley, valley sink scrub and grasslands are commonly used for overwintering. Two CNDDB records of mountain plover occurrences were documented within 10 miles of the Project. The nearest record (EONDX 49674) of this species was approximately 9.4 miles northeast of the BSA at an experimental restoration site consisting of fields with short foxtail brome and fallowed and plowed fields. There were approximately 40 overwintering birds at that location. Based on site conditions during the on-site surveys, overwintering habitat consisting of disked fields and annual grassland that could support this species exist within the BSA.[16]

Loggerhead Shrike (State Species of Special Concern). The loggerhead shrike is associated with open landscapes and is usually observed perching on a fence-line along rural roadways. Nesting habitat is usually in densely foliated shrubs and trees. No CNDDB records of loggerhead shrike occurrences were documented within 10 miles of the Project. Based on site conditions during the on-site surveys, no nesting habitat that could support this species is present within the BSA. Foraging and perching habitat occurs throughout the BSA. One loggerhead shrike was observed at the Processing Plant Site, which was perched on farming mater.[17]

San Joaquin Antelope Squirrel (State Endangered). The San Joaquin antelope squirrel inhabits relatively arid annual grassland and shrubland communities. Habitat of the San Joaquin antelope squirrel consists of grasslands with moderate shrub cover, which includes such species as saltbush, ephedra, bladder pod (*Peritoma arborea*), goldenbush (*Isocoma* sp.), snakeweed (*Gutierrezia* sp.), and others. Eleven CNDDB records of San Joaquin antelope squirrel occurrences were documented within 10 miles of the Project. The nearest record (EONDX) of this species was documented in 1932 approximately 0.3 mile east of the BSA but no specific information is provided for that record. Virtually all lands immediately east of the

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[15] Ibid. Page 5-10.

[16] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-10.

[17] Ibid.

BSA, aside from a linear strip of habitat along the California Aqueduct, has been converted to agricultural and would no longer support this species.[18]

Giant Kangaroo Rat (Federally Endangered, State Endangered). The giant kangaroo rat inhabits grasslands and shrub communities on a variety of soil types and on slopes up to about 22 percent at elevations of up to approximately 2,900 feet above sea level. Scattered common and spiny saltbushes (*Atriplex* sp.) or ephedra (*Ephedra* sp.) characterize areas where giant kangaroo rats are associated with shrubs. The most common herbaceous plants occurring within giant kangaroo rat habitat are red brome, annual fescue (*Vulpia myuros*), and red-stemmed filaree (*Erodium cicutarium*). Eleven CNDDB records of giant kangaroo rat occurrences were documented within 10 miles of the Project. The nearest record (EONDX 24057) of this species was documented in 1967 approximately 1.9 miles south of the BSA. Numerous small mammal burrows occur at the Processing Plant Site, along the water line that runs along the eastern border of the Processing Plant Site boundary, and in annual grassland habitat in the extreme south and southwest portions of the BSA.[19]

Fresno Kangaroo Rat (Federally Endangered, State Endangered). The Fresno kangaroo rat occupies grassland and alkali desert scrub communities on the San Joaquin Valley floor in Merced, Kings, Fresno, and Madera counties. It shelters in burrows that are dug by the kangaroo rats. Burrows are usually found in relatively light, sandy soils in raised areas. There are typically two to five burrow entrances that slant gently underground, and one or more holes that open from a vertical shaft. This species was most recently found only in alkali sink communities from 200 to 300 feet in elevation, but there are no known populations existing within its historical geographic range. No CNDDB records of Fresno kangaroo rat occurrences were documented within 10 miles of the Project. Numerous small mammal burrows occur at the Processing Plant Site and along the water line that runs along the eastern boundary of the Processing Plant Site.[20]

Tulare Grasshopper Mouse (CDFW Species of Special Concern). The Tulare grasshopper mouse inhabits hot, arid grassland and shrubland vegetation communities in the southern San Joaquin Valley and western foothills and valleys of California. One CNDDB record of the Tulare grasshopper mouse occurs within 10 miles of the Project. This record (EONDX 113698)

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[18] Ibid. Page 5-11.

[19] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-11.

[20] Ibid. Page 5-12.

was of one adult male captured in annual grassland approximately 3.4 miles west of I-5, approximately 4.6 miles west of the BSA, in 2016. Numerous small mammal burrows that could support the Tulare grasshopper mouse occur at the Processing Plant Site and along the water line that runs along the eastern boundary of the Processing Plant Site. [21]

American Badger (CDFW Species of Special Concern). The American badger is an uncommon permanent resident throughout California, except in high alpine habitats and in the northern North Coast. They can typically be found in grasslands, deserts, and drier habitats. Badgers are typically nocturnal and hunt or forage at night while spending daylight hours below ground. Normally, they have a single den entrance that is approximately eight to 12 inches in width, in an elliptical or half-moon shape, similar to their body shape. Dens are usually found in friable soils. No CNDDB records of American badger occurrences were documented within 10 miles of the Project. There was no American badger or American badger diagnostic sign (e.g. den, claw marks, or scat) identified within the BSA. However, there is potential for American badgers to be present from time to time within the BSA as transient foragers or even to establish dens, especially in areas of grassland habitat or in areas that contain high abundances of small rodents. There is habitat that is likely to support this species to the west of the Project, which would increase the potential for this species to visit and forage within the BSA. [22]

San Joaquin Kit Fox (Federally Endangered, State Threatened). San Joaquin kit foxes are a subspecies of kit fox that is endemic to the Central Valley of California. They are found primarily in the San Joaquin Valley, Carrizo Plain, and Cuyama Valley, as well as other small valleys in the western foothills of the Central Valley. They are only found west of the Sierra Nevada crest. They occupy arid to semi-arid grasslands, open shrublands, savannahs, and grazed lands with loose-textured soils. Fifteen CNDDB records of San Joaquin kit fox occurrences were documented within 10 miles of the Project. The nearest record (EONDX 53805) of this species was documented in 1997 approximately 1.3 miles northeast of the BSA along the California Aqueduct. This record documented one foraging kit fox adult during spotlighting surveys. Scattered areas suitable to support the San Joaquin kit fox exist near the Project site. Based on site conditions during the on-site surveys, annual grassland habitat that could support this species occurs to the west and south of the extreme western portion of the

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[21] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-12.

[22] Ibid. Page 5-13.

Natural Gas Service Line Route C and to the south and southwest of the Land Application Area. One San Joaquin kit fox juvenile was observed during the night spotlighting surveys along the eastern boundary of the plant processing site [23]

Other Protected Species

Nesting Birds and Raptors. Habitat within the BSA supports nesting native bird species, which are protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code. The on-site surveys were conducted during the nesting bird season (February 1 to September 15).

A barn owl (*Tyto alba*) nest was present in the duct work of an outbuilding in the northwest corner of the Processing Plant Site. A carcass of a barn owl nestling and an adult barn owl, along with prey remains, whitewash, and owl pellets were below the potential nest location inside the outbuilding. A cliff swallow (*Petrochelidon pyrrhonota*) nesting colony was present in the rafters of an open supply storage structure within the 500 feet buffer east of the Project site (see Figure 5-2 of Appendix B). An occupied barn owl nesting box was present on the south side of the BSA where the annual grassland habitat borders the orchards (see Figure 5-2 of Appendix B). One potential red-tailed hawk nest was in a cell phone tower within the orchards on the south end of the BSA (see Figure 5-2 of Appendix B) where one adult red-tailed hawk was perched below the potential nest. Thirteen additional nests were found within the Land Application Area (see Figure 5-2 of Appendix B), mainly in the rafters of storage structures or on electrical equipment. No nests were found on the Water Settling and Cleaning Pond Site, the Solid Materials Management Site or within the southern area of the most western portion of the Natural Gas Service Line Route C. At least half of the nests were occupied at the time of the survey. The other nests were either not occupied or there was no bird activity at the nest location at the time of the survey. No special-status species were nesting within or near the BSA.

Bats. Habitat within the BSA provides foraging habitat and limited areas in outbuildings that could support roosting bats. There are structures within the Processing Plant Site that could potentially support rooting bats, but no roosting bats, maternity colonies, or sign of roosting bats (e.g. guano, urine stains, or vocalization) were found to inhabit these structures or roost anywhere within the BSA. The surrounding orchards, annual grassland habitat, and

[23] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-13.

irrigation basins provide foraging habitat for bats and foraging bats were observed during the spotlighting surveys on the west side of the BSA within the Land Application Area.

Sensitive Natural Communities

The database and literature review identified five sensitive plant communities, the coastal and valley freshwater marsh, north central coast drainage Sacramento Sucker/Roach River, northern vernal pool, valley needlegrass grassland, and valley sink scrub, but there were no CNDDB records of these communities within 10 miles of the Project.[24] No sensitive plant community occurs within the BSA, primarily because all lands have been regularly disturbed by agricultural use.

There is no critical habitat present within the BSA or in its immediate vicinity. There are designated critical habitats for several special-status species to north and west of the BSA. The closest of these is 14.6 miles to the northeast, which is a critical habitat are for the Fresno kangaroo rat.

Jurisdictional Aquatic Resources

The NHD identified six intermittent streams encroaching into the BSA but only one of these streams was confirmed during the on-site surveys within the BSA. This stream was to the east of the Project site but it does not connect to any other waterways. In addition to these features, the NWI identified four Freshwater Ponds (PUBFx, PUSAx, and PUSCx) within the BSA, but none of these features were confirmed during the on-site surveys.

Wildlife Movement

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general, such as stop-over habitat that supports migrating birds or large contiguous natural habitats that support animals with very large home ranges (e.g., coyotes, mule deer [*Odocoileus hemionus californicus*]). They can also be small scale movement corridors such as riparian zones that provide connectivity and cover to support movement at a local scale.

[24] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-15.

A small area of the BSA is located within an identified wildlife movement corridor linking the BSA to the Western Fresno County wildlife linkage area identified in the Recovery Plan for Upland Species of the San Joaquin Valley[25], which is mapped to the north of the Project. There are no features on site that would lend themselves specifically to wildlife movement (e.g., riparian corridors). The site is surrounded by active orchards and the area is generally not conducive to wildlife movement.

Regulatory Setting

Federal Regulations

Federal Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (16 U.S.C. 704)(MBTA) makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in 50 Code of Federal Regulations 10, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species.

Federal Endangered Species Act of 1973

Section 3 of the federal Endangered Species Act (ESA) defines an endangered species as any species or subspecies "in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as any species or subspecies of fish, wildlife, or plants "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Threatened or endangered species and their critical habitat are designated through publication of a final rule in the Federal Register. Designated endangered and threatened animal species are fully protected from "take" unless an applicant has an incidental take permit issued by the USFWS under Section 10 or incidental take statement issued under Section 7 of the ESA. A take is defined as the killing, capturing, or harassing of a species. Proposed endangered or threatened species, or their critical habitats, are those for which a proposed regulation, but no final rule, has been published in the Federal Register.

[25] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 5-17.

State of California Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA establishes that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated as rare, threatened, or endangered through official listing by the California Fish & Game Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, including the California Department of Fish & Wildlife (CDFW) and landowners than are species that have not been listed.

On private property, endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. Threatened plants are protected by CESA, and rare plants are protected by the NPPA. However, CESA authorizes that "Private entities may take plant species listed as endangered or threatened under the ESA and CESA through a Federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA."

In addition, the California Environmental Quality Act (CEQA) requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts.

California Environmental Quality Act—Treatment of Listed Plant and Animal Species

ESA and CESA protect only those species formally listed as threatened or endangered (or rare in the case of the State list). Section 15380 of the CEQA Guidelines independently defines "endangered" species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and "rare" species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a rare or endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

Section 1602 of the California Fish and Game Code

Streambeds and other drainages that occur within the Planning Area are subject to regulation by the CDFW. Please note that although the agency is now called the California Department of Fish & Wildlife, the State Code is still named the California Department of Fish and Game (CDFG) Code. For purposes of this document, these terms are interchangeable. The CDFW considers most drainages to be "streambeds" unless it can be demonstrated otherwise. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or sub-surface flow that supports, or has supported, riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than Corps jurisdiction.

Porter-Cologne Act

The California State Water Resources Control Board (SWRCB) has determined in response to the U.S. Supreme Court decisions that reduce federal jurisdiction over Waters of the U.S., that the State would require that a Report of Waste Discharge be required for any discharge of waste, including fill, into "waters of the state", other than those projects requiring a federal Clean Water Act (CWA) Section 404 permit and the State's CWA Section 401 Certification of the federal permit, under the authority of the state Porter-Cologne Act. The Central Valley Regional Water Quality Control Board (Central Valley RWQCB) is responsible for issuing Waste Discharge Requirements (WDRs) to protect state surface and groundwater quality after reviewing a Report of Waste Discharge.

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code

These sections of the Fish and Game Code prohibit the "take or possession of birds, their nests, or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." Such a take would also violate Federal law protecting migratory birds.

Incidental Take Permits (*i.e.,* Management Agreements) are required from the CDFW for projects that may result in the incidental take of species listed by the State of California as endangered, threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

Local Regulations

Fresno County General Plan

The Fresno County General Plan outlines several policies intended for the protection of biological resources County-wide, including the following, which apply to the Project:

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 on-site 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.3: The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the value of the habitat for wildlife is maintained.

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.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.

Policy OS-F.7: The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches and on unused or marginal land for the benefit of wildlife.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item. In accordance with Appendix G of the CEQA Guidelines, the proposed Project would have a significant environmental impact if it 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 Game or the U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally-protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site; (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impacts and Mitigation Measures

Impact 3.4-1: *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?*

Less than Significant Impact with Mitigation Incorporation.

Impacts to Special-Status Plant Species

Twenty-four special-status plant species have potential to occur within the BSA. These include the San Joaquin woollythreads, palmate-bracted bird's-beak, lesser saltscale, crownscale, heartscale, showy golden madia, Lost Hills crownscale, brittlescale, California jewelflower, Lemmon's jewelflower, Hall's tarplant, recurved larkspur, San Joaquin spearscale, stinkbells, Munz's tidy-tips, shining navarretia, sylvan microseris, forked fiddleneck, California androsace, Hoover's eriastrum, cottony buckwheat, golden goodmania, San Joaquin bluecurls, and San Benito poppy.

There is no evidence that any of these 24 special-status plant species are present within the BSA. Heavily disturbed grassland habitat that could support these species is present within the southern area of the most western portion of Natural Gas Service Line Route C and to the west of it as well as within 500 feet of the orchards in the southwest and west. This habitat has been heavily disturbed by grazing. None of these special-status plant species were observed during the 2020 field survey and are unlikely to occur in the grassland habitat present within the BSA.

Project construction and operational activities are proposed to occur within the Project site which has been maintained by disking and mowing and which provides no habitat that could support any of the special-status plant species. Potential Natural Gas Service Line Routes A and B are located within existing and maintained heavily travelled dirt roadways along the Land Application Area and the surrounding orchards. Installation of the pipeline within these routes would not result in impacts to special-status plant species. Annual grassland habitat is present south and west of the most western portion of the Natural Gas Service Line Route C. The footprint of Natural Gas Service Line Route C would be in the maintained road south of Kamm Avenue, which does not contain habitat suitable to support these species. As such, impacts to special status plant species are ***less than significant.***

Impacts to Special-Status Animal Species

Fifteen special-status wildlife species have potential to occur within the BSA: western spadefoot, California glossy snake, blunt-nosed leopard lizard, coast horned lizard, San Joaquin coachwhip, western burrowing owl, Swainson's hawk, mountain plover, loggerhead shrike, San Joaquin antelope squirrel, giant kangaroo rat, Fresno kangaroo rat, Tulare grasshopper mouse, American badger, and the San Joaquin kit fox.

Western Spadefoot

There is no evidence that western spadefoot is present within the BSA, but seven irrigation basins (Basins 1 through 7) located within the orchards could support this species during months when water is present. None of these basins would be impacted by the Project development. The Project would have no impacts to these basins, as there were no burrows that could be used by the spadefoot as hibernacula found within the dirt roadways near these basins, and no impacts to the western spadefoot are anticipated to occur.

Blunt-nosed Leopard Lizard

There is no evidence that blunt-nosed leopard lizard is present within the BSA but degraded annual grassland habitat with some isolated allscale shrubs occurs south and west of the most western portion of the Natural Gas Service Line Route C as well as within the BSA to the south and southwest of the orchards. Though this habitat has been heavily disturbed by grazing, there are some small mammal burrows present, which are a necessary habitat component for the blunt-nosed leopard lizard. Blunt-nosed leopard lizards, if present, would only be present in these areas.

Potential direct impacts would include direct mortality to individuals that could occur through ground disturbance, crushing or destroying burrows occupied by this species, vehicle strikes, habitat loss, and poisoning. Potential indirect impacts would include stress resulting from noise and vibrations from soil disturbance, and increased light. Because the blunt-nosed leopard lizard is State Fully Protected species, avoidance of take is required.

No blunt-nosed leopard lizards would occur on the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, Land Application Area, or along the Natural Gas Service Line Routes A or B. No impacts to the blunt-nosed leopard lizard would occur in these areas of the Project. There is a potential for the blunt-nosed leopard lizard to be present in the westernmost section of the Natural Gas Service Line Route C. If natural gas service

is extended to the Project site along this route, mitigation measure BIO-1 shall be implemented to avoid impacts to this species.

Coast Horned Lizard

There is no evidence that coast horned lizard is present within the BSA but degraded annual grassland habitat with some isolated allscale shrubs occurs south and west of the most western portion of the Natural Gas Service Line Route C as well as within the BSA to the south and southwest of the orchards. Though this habitat has been heavily disturbed by grazing, there are some small mammal burrows present, which are a necessary habitat component for the blunt-nosed leopard lizard. Coast horned lizards, if present, would only be present in these areas.

Potential direct impacts would include direct mortality to individuals that could occur through ground disturbance, crushing or destroying burrows occupied by this species, vehicle strikes, habitat loss, and poisoning. Potential indirect impacts would include stress resulting from noise and vibrations from soil disturbance, and increased light.

No coast horned lizard would occur on the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, Land Application Area or along the Natural Gas Service Routes A or B No impacts to this species would occur in these areas of the Project. There is a potential for the coast horned lizard to be present in the westernmost section of the Natural Gas Service Line Route C. If natural gas service is extended to the Project site along this route, mitigation measure BIO-1 shall be implemented to avoid impacts to this species.

San Joaquin Coachwhip and California Glossy Snake

There is no evidence that San Joaquin coachwhip and California glossy snake is present within the BSA but degraded annual grassland habitat with some isolated allscale shrubs occurs south and west of the most western portion of the Natural Gas Service Line Route C as well as within the BSA to the south and southwest of the orchards. Though this habitat has been heavily disturbed by grazing, there are some small mammal burrows present, which are a necessary habitat component for these species. If San Joaquin coachwhip and California glossy snake are present, it would only be in these areas.

Potential direct impacts would include direct mortality to individuals that could occur through ground disturbance, crushing or destroying burrows occupied by this species, vehicle strikes, habitat loss, and poisoning. Potential indirect impacts would include stress resulting from noise and vibrations from soil disturbance, and increased light.

No San Joaquin coachwhip or San Joaquin glossy snake would occur on the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, Land Application Area, Land Application Area, or along the Natural Gas Service Line Routes A or B. No impacts to these species would occur in these areas of the Project. There is a potential for these species to be present in the westernmost section of the Natural Gas Service Line Route C. If natural gas service is extended to the Project site along this route, mitigation measure BIO-2 shall be implemented to avoid impacts to this species.

Western Burrowing Owl

There is no evidence that the western burrowing owl is present within the BSA but agricultural fields within and surrounding the BSA and annual grassland habitat along the south and west of Natural Gas Service Line Route C could provide potential nesting and foraging habitat. Because this species is present in the region year-round it is possible that western burrowing owls could become established in these areas or be present from time to time as transient foragers.

Potential direct impacts would include direct mortality to individuals that could occur through ground disturbance, crushing or destroying burrows occupied by this species, vehicle strikes, habitat loss, and poisoning. Potential indirect impacts would include stress resulting from noise and vibrations from soil disturbance, and increased light. Implementation of mitigation measure BIO-3 listed below would reduce any potential impacts to the western burrowing owl to a less than significant level.

Swainson's Hawk

The BSA contains suitable foraging habitat that could support Swainson's hawk. Foraging habitat occurs within annual grassland and disked agricultural fields within and surrounding the BSA. During the on-site surveys, there were three Swainson's hawks observed overflying the BSA.

Because of the presence of Swainson's hawks in the immediate area and existence of limited foraging habitat within and surrounding the BSA, there is potential for Swainson's hawks to nest on and within 0.5 mile of the BSA. There were no Swainson's hawk nests identified oin the BSA or within 0.5 mile of the BSA.

If nests become actively used by Swainson's hawks within the BSA, there is a potential for direct and indirect impacts to occur to this species. Direct impacts could consist of mortality as a result of loss of young, fledging, or eggs due to destruction of nest or abandonment of nests if construction activities would occur in close proximity to a nest during the nesting season of this species (February 15 through August 31). Construction-related noise, ground vibration, fugitive

dust, habitat loss and modification, introduction and spread of invasive species, or increased human activity which may result in a reduction in prey abundance and/or availability. Noise and vibration could cause physiological and/or loss of fitness in dependent young resulting from interruptions to brooding and/or feeding schedules. The Project could result in the loss of low-quality foraging habitat. The loss of the very small amount of potential foraging habitat would not jeopardize the continued existence of this species and thus, impacts to the foraging habitat of this species would be less than significant. Implementation of mitigation measure BIO-4 listed below would reduce impacts to this species to below significant levels.

Mountain Plover

There *is* no nesting habitat that could support this species or evidence that mountain plover occurs within the BSA, but disked fields and annual grasslands within the BSA could provide overwintering habitat. Mountain plovers tend to overwinter in flocks ranging from 50 to as high as 1,000 individuals[26] (Knopf and Wunder 2006) and it is unlikely that they would overwinter within the BSA. The Project could result in the loss of low-quality foraging habitat, but there is no evidence that this species forages within the BSA. The loss of the very small amount of potential foraging habitat would not jeopardize the continued existence of this species and thus, impacts to this species would be less than significant. No mitigation measures are warranted.

Loggerhead Shrike

One loggerhead shrike was present at the plant processing site and was perched at farming materials. No nesting habitat occurs within the BSA except for annual grassland habitat with some isolated allscale shrubs occurring to the south and west of the most western portion of the Natural Gas Service Line Route C, as well as within the BSA to the south and southwest of the orchards. Foraging and perching habitat occurs at the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, Land Application Area, and loggerhead shrike could occur from time to time as transient foragers.

Potential direct impacts could consist of mortality as a result of loss of young, fledging, or eggs due to destruction of nest or abandonment of nests if construction activities would occur in close proximity to a nest during the nesting season of this species (February 15 through August 31). Construction-related noise, ground vibration, fugitive dust, habitat loss and modification,

[26] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 6-5.

introduction and spread of invasive species, or increased human activity which may result in a reduction in prey abundance and/or availability. Noise and vibration could cause physiological and/or loss of fitness in dependent young resulting from interruptions to brooding and/or feeding schedules.

There is a potential for the nesting loggerhead shrike to be present in the westernmost section of the Natural Gas Service Line Route C. If natural gas service is extended to the Project site along this route, mitigation measure BIO-6 shall be implemented to avoid impacts to this species.

San Joaquin Antelope Squirrel

There is no evidence that San Joaquin antelope squirrel is present within the BSA but degraded annual grassland habitat with some isolated allscale shrubs occurs south and west of the most western portion of the Natural Gas Service Line Route C as well as within the BSA to the south and southwest of the orchards. This habitat has been heavily disturbed by grazing, but some small mammal burrows that could support this species are present.

Direct impacts would include direct mortality to individuals that could occur through ground disturbance, crushing or destroying burrows occupied by this species, vehicle strikes, habitat loss, and poisoning. Potential indirect impacts would include stress resulting from noise and vibrations from soil disturbance, and increased light.

No San Joaquin antelope squirrel would occur on the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, Land Application Area, or along the Natural Gas Service Line Routes A or B. No impacts to the San Joaquin antelope squirrel would occur in these areas of the Project. There is a potential for this species to be present in the westernmost section of Natural Gas Service Line Route C. If natural gas service is extended to the Project site along this route, mitigation measure BIO-5 shall be implemented to avoid impacts to this species.

American Badger

There is no evidence that the American badger is present within the BSA but agricultural fields within and surrounding the BSA and annual grassland habitat along the south and west of Natural Gas Service Line Route C could provide potential denning and foraging habitat. Because this species is highly mobile, there is some potential that American badger could become established in these areas or be present from time to time as transient foragers.

Potential impacts to this species could occur if there is an active badger den or transient individual within or near the area of development during the period of construction activities. Potential

direct impacts resulting in injury, death, or entrapment in dens and trenches or pipes could occur if an American badger occupies the construction area or travels through. Noise, vibration, and the presence of construction workers could alter normal behaviors if badgers are present, which could affect reproductive success. Implementation of mitigation measure BIO-3 listed below would reduce any potential impacts to the American badger to a less than significant level.

San Joaquin Kit Fox

There was one San Joaquin kit fox juvenile sighted along the eastern boundary of the Processing Plant Site during spotlighting surveys. No other diagnostic signs of San Joaquin kit foxes were seen during site investigations, except within the mixed grassland and saltbush scrub habitat to the west of the Project, and east of I-5. Habitat that could support this species occurs within the BSA includes the grassland habitat in the extreme south and southwest portions of the BSA, and in the grassland habitat to the south and west of the western most portion Natural Gas Service Line Route C. Those portions of the BSA that contain disked lands or mowed vegetation, such as the Processing Plant Site, Water Settling and Cleaning Pond Site, Solid Materials Management Site, and Land Application Area could support the creation of dens by the San Joaquin kit fox. Foraging habitat is present throughout the BSA and surrounding agricultural lands could also support the species. Because this species is highly mobile, there is some potential for the kit foxes to occur from time to time as transient foragers or even to establish a den within the BSA.

Potential impacts to this species could occur if an active San Joaquin kit fox den is established, or transient individual are present within or near areas where active construction is occurring. Potential direct impacts resulting in injury, death, or entrapment in dens and trenches or pipes could occur if a San Joaquin kit fox occupies the construction area or travels through. Construction activities could result in crushing or destroying a den with a kit fox inside. Noise, vibration, and the presence of construction workers could alter normal behaviors if badgers are present, which could affect reproductive success. Implementation of mitigation measure BIO-3 listed below would reduce impacts to San Joaquin kit fox to a less than significant level.

Nesting Birds

A variety of migratory birds and some active and inactive bird nests were identified during the examinations. All areas of the BSA contain orchards, disked or mowed lands, or small areas of annual grassland that provides opportunities for birds to establish nests. Bare ground from disking and mowed areas provide nesting habitat for ground-nesting bird species. Construction activities associated with all project components have a potential to impact nesting birds, if construction takes place during the nesting season (January 15 through September 1).

Ground-disturbing activities and vegetation removal could lead to the destruction of nests. Construction-related vibration, noise, and dust production, and human presence could alter the normal behaviors of nesting birds in the vicinity of the Project and lead to nest failure.

To avoid and minimize impacts to migratory birds including loggerhead shrike, mitigation measure BIO-6 listed below shall be implemented during construction to reduce impacts to nesting birds to a level that is less than significant.

Bats

There is no evidence that roosting bats are present within the BSA, but foraging bats were observed within the orchards. Some outbuildings that occur on the Project site could provide potential roosting habitat for bats, but examinations of those buildings resulted in no diagnostic signs (guano, urine staining, vocalizations) of bats. However, because bats are highly mobile there is a potential of bats becoming established in structures and other potential roosting sites prior to construction. Construction activities are not likely to impact foraging bats because bats would be foraging at night when construction activities would not be occurring. Implementation of mitigation measure BIO-7 would reduce any impacts to bats to a less than significant level.

As described above, significant impacts to special status species could occur; however, implementation of mitigation measures BIO-1 through BIO-7 would ensure that potential impacts are ***less than significant.***

Mitigation Measure:

BIO-1: Avoidance of Blunt-nosed Leopard Lizard and Coast Horned Lizard

If Natural Gas Service Line Route C is used to extend natural gas service to the Project site, a protocol-level survey for blunt-nosed leopard lizard shall be conducted in the western most portion of the route where the route is adjacent to grassland habitat. Surveys shall follow the 2019 CDFW Approved Survey Methodology for the Blunt-nosed Leopard Lizard. If blunt-nosed leopard or coast horned lizard is documented during the protocol-level surveys within the area of Project disturbance, species occurrences will be mapped using Geographic Information Systems (GIS) and the designated biologists will conduct on-site monitoring to assure no impacts to this species.

BIO-2: Avoidance of San Joaquin Coachwhip and San Joaquin Glossy Snake

If Natural Gas Service Line Route C is used to extend gas service to the Project

site, a pre-activity survey of annual grassland habitat within 500 feet of the western most position of the pipeline shall be conducted within 14 days of the start of Project activities. The survey shall be conducted by a qualified biologist knowledgeable in the identification of this species. Transects shall be spaced at no greater than 30-foot intervals to obtain a 100 percent coverage of the development footprint and 500-foot buffer. If no evidence of the San Joaquin coachwhip or California glossy snake is detected, no further action is required. If San Joaquin coachwhip or California glossy snake is documented during the pre-activity survey, the species occurrences will be mapped using GIS and a qualified biologist will conduct on-site monitoring to ensure the species is avoided and there are no impacts to this species.

BIO-3: Avoidance of Western Burrowing Owl, American Badger, and the San Joaquin Kit Fox

The following avoidance and minimization measures shall be implemented during all phases of Project construction to reduce the potential for construction activities to impact the burrowing owl, American badger, and the San Joaquin kit fox. This measure is based upon standard avoidance and minimization measures from the U.S. Fish and Wildlife Service 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance.

- Project construction-related vehicles shall observe a daytime speed limit of 20-mph throughout the site in all Project areas, except on County roads and State and federal highways.

- All Project construction activities shall occur during daylight hours, but if work must be conducted at night then a night-time construction speed limit of 10-mph shall be established.

- Off-road traffic outside of designated Project areas shall be prohibited.

- To prevent inadvertent entrapment of kit foxes or other animals during construction of the Project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or

more escape ramps constructed of earthen-fill or wooden planks shall be installed.

- Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted before proceeding with the work.

- In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS and CDFW shall be contacted for guidance.

- All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes and burrowing owls before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project site.

- No pets, such as dogs or cats, shall be permitted on the Project site.

- Project-related use of rodenticides and herbicides shall be restricted.

- A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the USFWS and CDFW.

- Upon completion of the Project, all areas subject to temporary ground disturbances (including storage and staging areas, temporary roads, pipeline corridors, etc.) shall be recontoured if necessary, and revegetated to promote restoration of the area to pre-Project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but after Project completion will not be subject to further disturbance and has the potential to be revegetated.

- Any Project personnel who are responsible for inadvertently killing or injuring one of these species shall immediately report the incident to their representative. This representative shall contact the CDFW (and USFWS in the case of San Joaquin kit fox) immediately in the case of a dead, injured, or entrapped San Joaquin kit fox, American badger, or western burrowing owl.

- The Sacramento Fish and Wildlife office and CDFW Region 4 office shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project related activities. The CDFW shall be notified in the case of accidental death to an American badger or western burrowing owl. Notification shall include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information.

- New sightings of San Joaquin kit fox, American badger, or western burrowing owl shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where a San Joaquin kit fox was observed shall also be provided to the USFWS.

BIO-4 Avoidance of Swainson's Hawk

If Project construction activities must occur during the Swainson's hawk nesting season (February 15 to August 31), pre-activity surveys shall be conducted for Swainson's hawk nests in accordance with the 2000 Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. The surveys shall be conducted on and within 0.5-mile buffer of the Project. To meet the minimum level of protection for the species, surveys shall be conducted during at least two survey periods. If an active Swainson's hawk nest is discovered at any time within 0.5-mile of active construction, a qualified

biologist shall complete an assessment of the potential for specific construction activities to impact the nest. The assessment would consider the type of construction activities, the location of construction relative to the nest, the visibility of construction activities from the nest location, and other existing disturbances in the area that are not related to construction activities of this Project. Based on this assessment, the biologist will determine if construction activities can proceed and the level of nest monitoring required. Construction activities shall not occur within 500 feet of an active nest but depending upon conditions at the site this distance may be reduced. Full-time monitoring to evaluate the effects of construction activities on nesting Swainson's hawks may be required. The qualified biologist shall have the authority to stop work if it is determined that Project construction is disturbing the nest. These buffers may need to increase depending on the sensitivity of the nesting Swainson's hawk to disturbances and at the discretion of the qualified biologist. If the biologist determines that construction cannot occur without risk of take of the species, then a State Incidental Take Permit (ITP) would need to be obtained prior to initiation of work activities.

BIO-5 Avoidance of San Joaquin Antelope Squirrel

If Natural Gas Service Line Route C is used to extend natural gas service to the Project site, a pre-activity survey of the adjacent annual grassland habitat shall be conducted within 14 days of the start of Project activities by a qualified biologist knowledgeable in the identification of this species. Transects shall be spaced at no greater than 30-foot intervals to obtain a 100 percent coverage of the development footprint and 500-foot buffer. The surveys shall be conducted during appropriate time and temperature constraints (April 1 to September 30 and 68 to 86 degrees F), If no evidence of the San Joaquin antelope squirrel is detected, no further action is required. If San Joaquin antelope squirrel is observed during the pre-activity survey, the species occurrences will be mapped using GIS and a qualified biologist will conduct on-site monitoring during construction activities. The biologist shall have the authority to temporarily stop activities so that impacts to this species can be avoided.

BIO-6 Pre-activity Surveys for Nesting Migratory Birds and Raptors

If Project construction activities must occur during the nesting season (February 1 to September 15), pre-activity nesting bird surveys shall be conducted within

seven days prior to the start of construction at any specific construction area. The construction site plus a 250-foot buffer for songbirds and a 500-foot buffer for raptors (other than Swainson's hawk) shall be included in the survey. Multiple surveys, conducted at approximately 30-day intervals, are likely to be needed based upon the extended construction period of the Project construction activities and extensive habitat for nesting birds that occurs on the Project. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring or routine monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.

BIO-7 Avoidance and Minimization Measures for Bats

A pre-activity survey for bats shall be conducted at the plant processing site within 14 days prior to the start of construction activities. If sign of day roosting bats is identified at any of the existing outbuildings during the pre-activity survey, a follow up flyout examination of the potential roost shall be conducted at dusk. If rooting bats are found to be present, then acoustical sampling shall be conducted to determine species. If day roosting bats are determined to be present, bats would be excluded from the roosting site by installing exclusion devices. Exclusion devices would only be installed at night while bats are away from the roost. If the day roosting bats are identified as special-status species, then an exclusion plan shall be prepared and approved by CDFW prior to initiating bat exclusions. If a maternity colony is present, then construction activities will be delayed until the colony has dispersed.

Impact 3.4-2: *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service, or have a substantial adverse effect on federally or*

state-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. The BSA does not support any sensitive natural communities and does not overlap critical habitat. Therefore, the Project would have no impacts to sensitive natural communities.

The BSA intersects one intermittent stream to the southeast of the proposed Project site. An approved jurisdictional determination of this intermittent streams has not been completed. This stream is not connected to a Traditional Navigable Water and therefore, does not fall under the jurisdiction of the U.S. Army Corps of Engineers through Section 404 of the Clean Water Act as "Waters of the U.S." This steam will not be impacted by Project development and an aquatic resource delineation that would be required to determine jurisdiction under Section 401 of the Clean Water Act and Section 1602 of the Fish and Game Code is not warranted.

Seven irrigation basins (Basin 1 through 7) were present within the BSA. These basins were located within the Land Application Area and the Water Settling and Cleaning Ponds Site and all basins except basins 1 and 2 were inundated at the time of the survey. These basins are isolated features that, except for Basin 2, would not be impacted by Project development. Basin 2 is in an area where a settling and cleaning pond would be constructed, but the conversion of this basin would not be a significant Project impact because that basin does not contain wetland features. An aquatic resource delineation to determine jurisdiction under Section 401 of the Clean Water Act and Section 1602 of the Fish and Game Code is not warranted. Impacts to these basins would be a less than significant impact and impacts to protected wetlands or sensitive natural communities are ***less than significant.*** To ensure impacts remain less than significant, implementation of Mitigation Measure HYD – 9 (from Section 3.10-1) would avoid the discharge of pistachio processing solids generated by the Project in solid material management areas that are within mapped floodplains.

Mitigation Measures

HYD - 9: No pistachio processing solids generated by the Project shall be applied in 100-year flood hazard zones mapped by the Federal Emergency Management Agency within the 160-acre solid materials management site or within the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds.

Impact 3.4-3: *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 site; (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The Project site does not intersect any regional or local wildlife movement corridors, nor does it support an important wildlife nursery site.[27] No impacts to wildlife movement or nursery sites would occur and the Project would not conflict with the Fresno County General Plan.[28] The Project is located within an area covered by the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan (HCP). This HCP applies only to PG&E's activities and does not apply to this Project. No Project impacts related to adopted or approved plans would occur, and no measures are warranted. There is ***no impact.***

Mitigation Measure

None are required.

Cumulative Impacts.

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to biological resources is the western portion of the San Joaquin Valley. Development in Fresno County and the San Joaquin Valley has resulted in a decline of many plant and animal species; however, implementation of BIO-1 through BIO-7 would ensure that impacts remain less than significant to biological resources. Impacts are ***less than cumulatively considerable.***

[27] Biological Analysis Report for the Kamm Avenue Processing Plant Project. Prepared by Quad Knopf, Inc. August 2020. Appendix B. Page 6-13.
[28] Ibid.

3.5 Cultural Resources

This section of the DEIR identifies potential impacts of the proposed Project on cultural, archaeological and historical resources.

Cultural resources include prehistoric-era archaeological sites, historic-era archaeological sites, Native American traditional cultural properties, sites of religious and cultural significance, and historical buildings, structures, objects, and sites. The importance of any single cultural resource is defined by the context in which it was first created, current public opinion and modern yet evolving analysis. From the analytical perspective temporal and geographic considerations help to define the historical context of the Project area.

A Cultural Resources Survey was prepared for the Project and is the basis for analysis for the discussion herein (see Appendix C). Tribal consultations pursuant to SB 18 and AB 52 are addressed in Section 3.18 – Tribal Cultural Resources. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Natural Environment

The study area is situated in the San Joaquin Valley, 2.67 mile east of the foot slopes of the Ciervo Hills. The immediate study area has been heavily disturbed and was formerly used for agriculture. Prior to its current development, the Project area would have been typical arid California Prairie, dominated by sparse perennial bunch grasses such as Purple Needle Grass, Nassella pulchra, and during years of optimum precipitation, annual forbes such as California Poppy. The study area is located approximately 2.4 miles north of Hondo Creek, 7 miles north of Cantua Creek and 14 miles south of Panoche Creek, the only reliable water sources in the area. Given its distance from any water source, Native American occupation of the immediate study area is highly unlikely within the discernable past.[1]

Ethnography and Ethnohistory

The indigenous people of the San Joaquin Valley and its bordering foothills of the Sierra and Diablo Ranges are speakers of Yokutsan languages from the Penutian language family. The word yokuts or *yokotch* translates as people in most of the Yokutsan dialects and has been attached to

[1] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 5.

the many groups that speak this language as a Tribal appellation by early anthropologists working in the region. The majority of Yokuts lived along rivers, seasonal streams and permanent springs on the more well-watered eastern side of the San Joaquin Valley, around the shores of historic Tulare Lake and along the braids of the San Joaquin River as it flowed north from the big bend of the river near what is now Mendota. Valley lands between water courses usually lacked resources necessary for settlements. Lieutenant George H. Derby, US Topographical Engineers, noted during his reconnaissance survey of the San Joaquin (Tulare) Valley in April and May of 1850 that "The Tulare valley, from the mouth of the Mariposa to the Tejonpass at its head, is about one hundred and twenty mile in extent, and varies from eight to one hundred miles in width. With the exception of a strip of fertile land upon the rivers emptying into the (Tulare) lake from the east, it is little better than a desert. The soil is generally dry, decomposed and incapable of cultivation, and the vegetation, consisting of Artemisias [sic] and wild sage, is extremely sparse."[2] The study area does not fall within any immediate known Tribal areas but is closest to the Village sites of the *Pitkachi* about 18 miles to the NINE.[3] The *Pitkachi*, a Tribe of the San Joaquin River Yokuts group of the Foothill Yokuts division, occupied the area south of the San Joaquin in between Mendota and Herndon in present day Fresno. Known ethnographic villages located in this area include *Kohuou*, near Herndon, *Weshiu* on a slough west of *Kohuou*, and *Gewachiu* NE of Mendota. The *Pitkachi* were said to be named after a salt or alkali that was "evil-smelling".[4]

Yokuts occupants of the San Joaquin Valley and adjoining Sierran foothills were hunters and gatherers who depended upon the seasonal vegetal and faunal resources. Similar to their neighboring Tribes, the *Pitkachi* lived in permanently established villages during most of the year, usually between the months of October and May. The rest of the year, they would travel across their territory, tracking seasonally available plants as well as game and fish. Their principal villages were located along permanent springs, sloughs, and streams, while temporary camps were scattered throughout their area along seasonal drainages. Pounding rocks, the most visible vestige of Native American occupation, are located on rock boulders and bedrock outcrops above seasonal or permanent water courses, but are rarely found on the valley floor. River cobble mortars or wooden mortars on fallen tree logs were more commonly used in this area. The abundance of resources in the valley supported a socially complex lifestyle, with the high population numbers normally associated with agricultural peoples.[5]

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[2] Ibid. Page 6.
[3] Ibid.
[4] Ibid.
[5] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 7.

To the West of the subject property, lay El Camino Viejo A Los Angeles, (El Camino Viejo, the "Old Road"). This caretta (ox cart) road is one of the oldest trails in present day California, parts of which are still travelled on today. El Camino Viejo started from San Pedro Bay, passed Los Angeles, Mission San Fernando, Cuddy Valley and entered the San Joaquin Valley at San Emidio Creek in Kem County. The road skirted the valley along the Coastal Ranges ending at San Francisco Bay near present day Oakland. The trail came as close as 1.12 miles SW of the SW comer of the subject property between the old watering holes on Arroyo Hondo to the south and Arroyo de Panoche Grande to the NW. El Camino Viejo was used as early as the late 1700s and became a prominent trail by the 1820s.[6]

Historical Resources

In April 2019, the Table Mountain Cultural Resources Department sent a record search request to the Southern San Joaquin Valley Information Center. The record search indicated no archaeological resources had been previously identified on the subject property or within ½ mile radius.[7]

Geoarchaeological Context

On March 19, 2019 and August 27, 2020, Table Mountain Rancheria Cultural Resources staff undertook an extensive on-foot investigation of the study area. Cultural Resources staff used both on-site and in- office methods to complete our geoarchaeology review. Our on-site procedure involved examining surface soils composition throughout the study area. In-office procedures involved identifying soils utilizing the UC Davis California Soil Resource lab. Soils identified within the study area are as follows; Cerini Sandy Loam, subsided (490), Cerini Clay Loam, subsided (491), Panoche Loam (492) and Panoche Clay Loam, subsided (493). These alluvium soils, derived from the calcareous sedimentary rocks of the Diablo Range, are commonly found in the dry footslopes of the western edge of the San Joaquin Valley north of the Tulare Lake Basin.

The study area was evaluated by Caltrans and Far Western and Associates in 2019 as "Low" sensitivity for both surface and buried deposits.[8]

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[6] Ibid.
[7] Ibid. Page 8.
[8] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 11.

Regulatory Setting

Federal Regulations

National Historic Preservation Act (1966)

The National Historic Preservation Act (NHPA) is the most prominent federal law dealing with historic preservation. The NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our national 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 (Section 106) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. All projects that are subject to NEPA are also subject to compliance with Section 106 of the NHPA and the NEPA requirements concerning cultural resources can be addressed through compliance with Section 106 of the NHPA process.

Provisions of NHPA establish a National Register of Historic Places (The National Register) maintained by the National Park Service, the Advisory Council on Historic Preservation, State Offices of Historic Preservation, and grants-in-aid programs. At the federal level, the Office of Historic Preservation (OHP) carries out reviews under Section 106 of the National Historic Preservation of 1966, as amended.

State of California Regulations

In the State of California, the process of reviewing projects and decisions that may impact cultural resources including historic, archaeological, and paleontological resources is conducted under several different federal, state, and local laws. CEQA requires that public agencies consider the effects of their actions on historical resources eligible for listing on the California Register of Historical Resources.

Additionally, California Public Resources Code 5024 requires consultation with OHP when a project may impact historical resources located on State-owned land. California State law (SB 18) requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places ("cultural places").

California Register of Historic Resources (CRHR)

California State law also provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in CEQA documents. Under

CEQA, a cultural resource is considered an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Criteria identified in the CEQA Guidelines are similar to those described under the NHPA. The State Historic Preservation Office (SHPO) maintains the CRHR. Historic properties listed, or formally designated for eligibility to be listed, on The National Register are automatically listed on the CRHR. State Landmarks and Points of Interest are also automatically listed.

The CRHR can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

Health and Safety Code, Section 7050.5

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC). CEQA Guidelines (Public Resources Code Section 5097) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

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.

These regulations 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 Native American Heritage Commission, 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.

The Notice of Preparation, which briefly describing the proposed Project, including a map of the Project area, was sent to the State Clearinghouse which notifies Native American representatives of the opportunity to comment on the proposed Project. To date, no comments or concerns have been received.

California Historical Resources Information System (CHRIS)

The California Historical Resources Information System (CHRIS) is a statewide system for managing information on the full range of historical resources identified in California. CHRIS is a cooperative partnership between the citizens of California, historic preservation professionals,

twelve Information Centers, and various agencies. This system bears the following responsibilities: integrate newly recorded sites and information on known resources into the California Historical Resources Inventory; furnish information on known resources and surveys to governments, institutions, and individuals who have a justifiable need to know; and supply a list of consultants who are qualified to do work within their area.

Typically, the initial step in addressing cultural resources in the project review process involves contacting the appropriate Information Center to conduct a record search. A record search should identify any previously recorded historical resources and previous archaeological studies within the project area, as well as provide recommendations for further work, if necessary. Depending on the nature and location of the project, the project proponent or lead agency may be required to contact appropriate Native American representatives to aid in the identification of traditional cultural properties.

If known cultural resources are present within the Project area, or if the Project area has not been previously investigated for the presence of such resources, the Information Center may recommend a survey for historical, archaeological, and paleontological sites. Cultural resources that may be adversely affected by an undertaking should be evaluated for significance. For archaeological sites, a significance evaluation typically involves conducting test excavations. For historical sites or standing structures, historical research should be conducted and an architectural evaluation may be warranted. If significant, the resource should be protected from adverse impacts. Data recovery excavations may be warranted in the case of unavoidable damage to archaeological sites. If human burials are present, the appropriate coroner's office should be contacted. A professional archaeologist and appropriate Native American representatives should also be consulted.

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

California Environmental Quality Act (CEQA)

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when

"historically significant" or "unique" cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal NRHP criteria for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Local Regulations

Fresno County General Plan

The following lists goals and policies from the Fresno County 2000 General Plan pertaining to cultural resources that are applicable to the proposed Project.

Goal OS-J. To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment.

Policy OS-J.1. The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, 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 archeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.

Policy OS-J.2. The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the locations of archeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

Policy OS-J.9. In approving new development, the County shall ensure to the maximum extent practicable, that the location, siting, and design of any project be subordinate to significant geologic resources.

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the project would have a significant impact on cultural resources if it would cause any of the following conditions to occur:

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

Under CEQA, significant cultural resources are those archaeological resources and historical properties that:

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

Unique resources under CEQA, in slight contrast, are those that represent:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

Impacts and Mitigation Measures

Impact 3.5-1: *Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?* or

Impact 3.5-2: *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

Less Than Significant With Mitigation. As previously described, according to the records search and site survey, there are no recorded cultural resources within the Project area. Additionally, the study area was evaluated by Caltrans and Far Western and Associates in 2019 as "Low" sensitivity for both surface and buried deposits.[9]

Project construction and operation would occur on existing disturbed lands; however, further disturbance could potentially discover buried sensitive historical, archaeological or cultural resources. This would be a potentially significant impact. However, mitigation measure CUL-1 included herein will reduce the impact to a less than significant level. In addition, due to the findings by Caltrans of potential sensitivity for surface and/or buried cultural deposits within the flood plain of Arroyo Ciervo, any ground disturbance associated with trenching for high pressure gas route Option A and Option B (See Figure 2-5 of the Project Description) within the southern half of Section 23 in Township 16S, Range 14E of the Mount Diablo Meridian would require the presence of a qualified archaeological monitor. Mitigation Measure CUL – 2 is included herein to require a monitor at this location. With implementation of these mitigation measures, impacts are determined to be ***less than significant.***

Mitigation Measures:

CUL-1: Should any potentially significant cultural, historical, archaeological or fossil resources be discovered, no further ground disturbance shall occur in the area of the discovery until the Planning Director concurs in writing that adequate provisions are in place to protect these resources. Unanticipated discoveries shall be evaluated for significance by a certified professional archaeologist or paleontologist that meets the Secretary of the Interior's Professional Qualifications Standards. If significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; curate materials with

[9] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 11.

recognized scientific or educational repository; and provide a comprehensive final report as required by Senate Bill 18; California Historical Building Code (Title 24, Part 8); California Public Resources Code Sections 5020-5029.5, 5079-5079.65, 5097.9-5097.998, and 5097.98; and California State Health and Safety Code, Section 7050.5, as applicable.

CUL-2: A qualified archaeological monitor shall be present during ground disturbance activities associated with installation of the Project's proposed high pressure gas route (either Option A or Option B) within the Arroyo Ciervo flood plain located within the southern half of Section 23 in Township 16S, Range 14E of the Mount Diablo Meridian.

Impact 3.5-3: *Disturb any human remains, including those interred outside of formal cemeteries?*

Less Than Significant With Mitigation. California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically, California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within a project site, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Although soil-disturbing activities associated with development in accordance with the proposed project could result in the discovery of human remains, compliance with existing law would ensure that impacts to human remains would not be significant.

Project development would occur on existing disturbed lands; however, further disturbance could potentially uncover human remains. This would be a potentially significant impact. However, mitigation measure CUL-3 included herein will reduce the impact to a ***less than significant*** level.

Mitigation Measures:

CUL-3: If human remains are unearthed during excavation and/or construction activities, all activity shall cease immediately. No further disturbance shall occur until the County

Coroner has made the necessary findings as to the origin and disposition pursuant to PRC Section 5097.98(b). If the human remains are determined to be of Native American decent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the City shall ensure that the immediate vicinity, according to generally accepted cultural or archeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the City has discussed and conferred with the most likely descendants regarding their recommendations.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to cultural resources is all of Fresno County. Development in Fresno County and the San Joaquin Valley has likely resulted in the loss or degradation of historic and/or archaeological resources. As discussed above, implementation of mitigation measures will ensure that Project implementation avoids and/or minimizes a cumulative loss of these resources if they are found during Project activities and would reduce impacts associated with cumulative development to a less than significant level. As such, the proposed projects impact to cultural and tribal resources would be ***less than cumulatively considerable.***

3.6 Energy

This section of the DEIR analyzes the Project's potential impacts on energy resources. The data utilized for analysis of this section is based on the Energy Analysis Report (EAR) prepared for this Project by Mitchell Air Quality Consulting. The full EAR can be reviewed in Appendix D. No NOP comments were received pertaining to energy.

Environmental Setting

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy consumption in California was 7,967 trillion BTU's in 2018 (the most recent year for which this specific data is available), which equates to an average of 202 million BTU's per capita.[1] Of California's total energy usage, the breakdown by sector is 40 percent transportation, 23 percent industrial, 19 percent commercial, and 18 percent residential.[2] Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.

While BTUs measure total energy usage, electricity is generally measured in kilowatt-hours (kWh) which is the standard billing unit for energy delivered to consumers by electrical utilities.

[1] U.S. Energy Information Administration, California State Profile and Energy Estimates. https://www.eia.gov/state/print.php?sid=CA. Accessed October 2020.
[2] Ibid.

The electricity consumption attributable to Fresno County from 2009 to 2019 is shown in Table 3.6-1. As indicated, energy consumption in Fresno County varied approximately 11 percent over the last 10 years.

Table 3.6-1
Electricity Consumption in Fresno County 2009 – 2019[3]

Year	Electricity Consumption (in millions of kilowatt hours)
2009	7,078
2010	6,903
2011	6,886
2012	7,382
2013	7,513
2014	7,686
2015	7,686
2016	7,625
2017	7,461
2018	7,602
2019	7,387

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of

[3] California Energy Commission. Energy Reports. Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed October 2020.

the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel.

Natural gas is provided to the Project area by Pacific Gas & Electric. The natural gas consumption attributable to Fresno County from 2009 to 2019 is provided in Table 3.6-2, Natural Gas Consumption in Fresno County 2009-2019. Natural gas consumption in Fresno County varied 30% over the 10-year span.

Table 3.6-2
Natural Gas Consumption in Fresno County 2009 – 2019[4]

Year	Natural Gas Consumption (in millions of therms)
2009	271
2010	283
2011	296
2012	306
2013	300
2014	295
2015	300
2016	285
2017	341
2018	347
2019	352

Transportation Energy

According to the U.S. Energy Administration, transportation accounted for 40 percent of California's total energy consumption in 2018.[5] In 2019, California consumed 15.4 billion gallons

[4] California Energy Commission. Energy Reports. Gas Consumption by County. http://www.ecdms.energy.ca.gov/gasbycounty.aspx Accessed October 2020.
[5] U.S. Energy Information Administration, California State Profile and Energy Estimates. https://www.eia.gov/state/print.php?sid=CA. Accessed October 2020.

of gasoline (including aviation gasoline) and 3.0 billion gallons of diesel fuel.[6] More motor vehicles are registered and more vehicle miles are traveled in California than in any other state.[7]

According to the Board of Equalization (BOE), statewide taxable sales figures indicate a total of 15,471 million gallons of gasoline and 1,777 million gallons of diesel fuel were sold in 2018.[8] Although exact estimates are not available by County, retail fuel outlet survey data indicates Fresno County accounted for approximately 2.38 percent and 2.87 percent of total statewide gasoline and diesel sales, respectively, in 2018.[9]

Regulatory Setting

Federal Regulations

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Energy and Policy Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act of 2007

This Act set increased Corporate Average Fuel Economy (CAFÉ) standards for motor vehicles and includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This Act requires increasing levels of renewable fuels to replace petroleum. The U.S. EPA is responsible for developing and implementing regulations to ensure transportation fuel sold into the US contains a minimum volume of renewable fuel.

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[6] California Department of Tax and Fee Administration. June 2020 – Motor Vehicle Fuel 10 Year Reports and Taxable Diesel Gallons 10 Year Report. https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm. Accessed October 2020.
[7] U.S. Energy Information Administration. California Profile Analysis. Updated January 16, 2020. https://www.eia.gov/state/analysis.php?sid=CA. Accessed October 2020.
[8] California Energy Commission. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. https://www.energy.ca.gov/media/3874 Accessed October 2020.
[9] California Energy Commission. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. https://www.energy.ca.gov/media/3874 Accessed October 2020.

The RFS programs regulations were developed in collaboration with refiners, renewable fuel products, and other stakeholders and were created under the Energy Policy Act of 2005. The RFS program established the first renewable fuel volume mandate in the US. As required under the act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Act, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline:
- EISA increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA required by the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.[10]

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternate energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO2) in model year 2025, on an average industry

[10] U.S. EPA. Renewable Fuel Standard Program. Overview for Renewable Fuel Standard. https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard. Accessed October 2020.

fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 – 2018. The standards for CO2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018-2027 for certain trailers, and model years 2021-2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.[11]

In August 2018, The USEPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). This rule would modify the existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks, and establish new standards covering model years 2021-2026. SAFE standards are expected to uphold model year 2020 standards through 2026.[12]

State of California Regulations

Integrated Energy Policy Report

Senate Bill 138 (Bowen Chapter 568, Statues of 2002) requires the California Energy Commission to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy

[11] U.S. Department of Transportation. Briefing Room. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks. https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks. Accessed December 2019.

[12] U.S. Department of Transportation. SAFE. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20(SAFE)%20Vehicles%20Rule%20proposed,model%20years%202021%20through%202026. Accessed October 2020.

recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public and safety (Public Resources Code §25301(a)).

The 2019 Integrated Energy Policy Report[13] (IEPR) was adopted in February 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, transportation fuel supply reliability issues, and the California Energy Demand Forecast.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 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 end energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in California. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5)

[13] California Energy Commission. 2019 Integrated Energy Policy Report Update. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report. Accessed October 2020.

environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For nonresidential land uses, there are 39 mandatory measures including, but not limited to, exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to nonresidential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. Starting in 2020, the 2019 standards improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements; and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 Building Energy Efficiency Standards are approximately 53 percent more efficient than the 2016 Title 24 Energy Standards for residential development and approximately 30 percent more efficient for nonresidential development.

Executive Order B-30-15

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent;
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner;
- Reduce petroleum use in cars and trucks by up to 50 percent;
- Reduce emissions of short-lived climate pollutants; and
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Senate Bill (SB) 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's

18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In 2010, CARB released the proposed GHG reduction targets for the MPOs. The proposed reduction targets for the Kern COG region were five percent by year 2020 and ten percent by year 2035 through September of 2018, then six percent by 2020 and 13 percent by 2035 beginning in October of 2018.[14]

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The 2003 Integrated Energy Policy Report recommended accelerating that goal to 20 percent by 2010, and the 2004 Energy Report Update further recommended increasing the target to 33 percent by 2020. The state's Energy Action Plan also supported this goal. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent each year with a target of 20 percent renewables by 2010. Publicly owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

In 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring that "all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed CARB to enact regulations to achieve the goal of 33 percent renewables by 2020.

In 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total

[14] California Air Resources Board. Regional Plan Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed October 2020.

kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and to require that 100 percent of all electricity supplied come from renewable sources by 2045.

Executive Order B-55-18

In 2018, Governor Brown signed EO B-55-18 to achieve carbon neutrality by moving California to 100 percent clan energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land.

Low Carbon Fuel Standard Regulation

CARB initially approved the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in the 2008 Scoping Plan to reduce California's GHG emissions. The LCFS regulation defines a Carbon intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule." The LCFS regulation requires a reduction of at least 10 percent in the CI of California's transportation fuels by 2020 and maintains that target for all subsequent years.

CARB has begun the rulemaking process for strengthening the compliance target of the LCFS through the year 2030. For a new LCFS target, the preferred scenario in the 2017 Scoping Plan Update identifies an 18 percent reduction in average transportation fuel carbon intensity, compared to a 2010 baseline, by 2030 as one of the primary measures for achieving the state's GHG 2030 target. Achieving the SB 32 reduction goals will require the use of a low carbon transportation fuels portfolio beyond the amount expected to result from the current compliance schedule.[15]

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's

[15] California Air Resources Board. CARB amends Low Carbon Fuel Standard for wider impact. https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact. Accessed October 2020.

Advanced Clean Car program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016 plan remains in effect, the 2018 update function as an addendum, highlighting the most important actions State agencies are taking in 2018 to implement the directives of EO B-48-18.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact related to energy if it will:

- Result in a wasteful, inefficient or unnecessary consumption of energy resources;
- Conflict with or obstruct state or local plans.

Impacts and Mitigation Measures

Impact 3.6-1: *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less Than Significant. Project implementation could increase the demand for electricity and natural gas within the Project area and gasoline consumption in the region during construction and operation of new land use developments.

<u>Construction Energy Consumption</u>

Project construction is assumed to be completed in 2021. Construction activities would consume energy through the operation of heavy off-road equipment, trucks, and worker traffic. Construction equipment fuel consumption for each of was based on equipment lists generated using CalEEMod default values. The fuel consumption of off-road equipment calculated in this analysis is based on an SCAQMD estimated fuel consumption rate of 0.05 gallon per horsepower-hour and the horsepower, usage hours, and load factors from CalEEMod model runs prepared for the project's air quality analysis.

Based on the anticipated construction schedule and hours of use, construction equipment would result in the consumption of approximately 117,150 gallons of diesel fuel over the entire construction period.

Worker, vendor, and haul trips would result in approximately 451,856 VMT over the entire construction period. A countywide average fuel consumption of 26.6 miles per gallon (mpg) for employee vehicles, 11.4 mpg for vendor trucks, and 7.2 mpg for haul trucks were obtained from EMFAC 2017. The results indicate that construction trips would consume approximately 22,783 gallons of motor vehicle fuel. Trucks will be used to provide liquefied natural gas (LNG) to the Project site during the first year of operations.

Although the proposed Project would result in the consumption of an estimated 117,150 gallons of diesel, 22,783 gallons of motor vehicle fuels during construction, and 1,767 gallons of motor vehicle fuel to truck LNG to the site in the first year of operations, the Project is expected to achieve energy efficiencies typical for ag industrial and food processing projects in California. Construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency, combined with local, state, and federal regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. Considering these reductions in transportation fuel use, the proposed Project would not result in the wasteful and inefficient use of energy resources during construction and impacts would be less than significant. Detailed modeling results are provided in Appendix D. Construction energy use is summarized in Table 3.6-3.

Table 3.6-3
Construction Energy Consumption[16]

Activity	Variable	Consumption Rate	Consumption Amount
Construction Equipment Diesel Fuel Use	hp-hr of equipment use per project Hours of Use	0.05 gal/hp-hr 18,060 hours	117,150 gallons (diesel)
Construction Employee VMT	VMT/Project	VMT = 352,296 mpg = 26.6	13,243 gallons (all fuels)
Construction Vendor Truck VMT	VMT/Project	VMT = 84,000 mpg = 11.4	7,379 gallons (all fuels)
Construction Haul Trucks VMT	VMT/Project	VMT = 15,560 mpg = 7.2	2,161 gallons (diesel)
LNG Haul Trucks Year 1 VMT	VMT/Project	VMT = 12,768 mpg = 7.2	1,767 gallons (diesel) (year 1 only)

Notes:

mpg = miles per gallon VMT = vehicle miles traveled hp-hr = horsepower per hour

Source of data for construction and VMT: CalEEMod 2016.3.2 Source of Fresno County mpg for 2021: EMFAC 2017. Modeling results are provided in Appendix D.

[16] Energy Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. December 2020. See Appendix D. Pages 8-9.

Operation Energy Consumption

Long-term energy consumption associated with the Project includes electricity and natural gas consumption by buildings, electricity required for water supply, treatment, distribution, and wastewater treatment, fuels for motor vehicle travel, and stationary natural gas equipment used to process the pistachios.

Electricity and Natural Gas Consumption

During operations the proposed Project buildings would consume natural gas for space heating, and water heating associated with the land uses on the project site. The natural gas consumption from buildings was estimated using the CalEEMod default values. The results of the analysis indicate that the project buildings would consume approximately 3,707,900 thousand British thermal units (kBtu) per year of natural gas per year during operation. The stationary equipment used for drying and heating the pistachios during processing were estimated to consume 316.99 million cubic feet (MMCF) of natural gas per year.

In addition to the consumption of natural gas, the proposed Project would use electricity for lighting, air conditioning, and other uses associated with the project. Electricity use during operations was estimated using CalEEMod default values. The results of the modeling indicate that the project would use approximately 2,987,000 kilowatt-hours (kWh) of electricity per year. The electricity used by the Project is expected to be provided by increasing amounts of renewable energy sources as PG&E increases its renewable energy portfolio to meet the State 60 percent mandate by 2030.

As described above, the proposed Project would result in a long-term increase in demand for electricity from PG&E. However, the Project would be designed to meet the most recent Title 24 standards. Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. Title 24 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. Therefore, impacts from the wasteful or inefficient use of electricity or natural gas during operation of the Project would be ***less than significant***.

Water Treatment, Conveyance, and Distribution

Water used for indoor and outdoor purposes requires electricity for water treatment, conveyance, and distribution. The Project's water demand was included in the Project description (see Chapter 2). The Project will use surface water that will be treated onsite. Approximately 65.4 million gallons (Mgal) per year is expected to be used as process water, and 2.7 Mgal per year is expected

to be used for domestic purposes, including equipment cleaning and employee use. Approximately 315,000 gallons per year of the domestic water will be used by employees. This amount of water consumption would result in the use of approximately 368,000 kWh of electricity per year for treatment, conveyance, distribution, and wastewater treatment.

Although the proposed Project would result in electricity use from the treatment, conveyance, and distribution of water to the project site, the project would also require all water fixtures to be compliant with the latest version of the California Green Building Standards Code and the MWELO, which would reduce the amount of water used by the Project and require compliance with regulations relating to drought conditions. In addition, the Project will recover and provide for irrigation reuse of approximately 80 to 90 percent of the water supplied to the facility, or from 167 to 188 acre-feet per year. Irrigation water from Plant operations will be supplied to pistachio growers in the region. Therefore, the Project would not result in the wasteful or inefficient use of electricity for water treatment, conveyance, and distribution and impacts would be ***less than significant.***

Wastewater Service

The Project will treat employee generated wastewater using onsite septic systems which require no energy to operate. Process waste water will be stored in onsite ponds for later use for irrigating crops. Water would require pumping for distribution which would result in the consumption of electricity. The analysis used CalEEMod energy intensity factors for wastewater treatment as a conservative assumption. Energy used for treating Project wastewater will increasingly be generated by renewable energy sources to comply with the Renewable Portfolio Standard (RPS) standards that apply to the energy utility serving the Project area.

Therefore, the Project would not result in the wasteful or inefficient use of electricity for wastewater treatment, and impacts would be ***less than significant***.

Fuel Consumption

During operation, vehicle trips would be generated by the Project. The Project was modeled with CalEEMod using project specific trip generation rates based on the facility's seasonal operations. The results show that the vehicle trips generated would result in approximately 1,970,718 VMT per year from all vehicle types. Based on a countywide average fuel consumption from EMFAC 2017 for all vehicle classifications for 2021, the proposed Project would result in the consumption of an estimated 143,353 gallons per year of gasoline and diesel transportation fuel. LNG haul trucks are estimated to consume 1,767 gallons during the first year of operation.

Various federal and state regulations including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program would serve to reduce the Project's transportation fuel consumption progressively into the future. Therefore, the Project would avoid the wasteful and inefficient use of transportation fuel during operations and impacts would be ***less than significant.*** In addition, the Project will serve a large pistachio growing area and will provide processing facilities that require shorter travel distances from the farms than under current conditions and would reduce regional transportation related VMT and energy use.

State and federal regulatory requirements addressing fuel efficiency are expected to increase fuel efficiency over time as older, less fuel-efficient vehicles are retired. The efficiency standards and light/heavy vehicle efficiency/hybridization programs contribute to increased fuel efficiency and therefore would reduce vehicle fuel energy consumption rates over time. While the Project would increase the consumption of gasoline and diesel proportionately with projected population and economic growth, the increase would be accommodated within the projected growth as part of the energy projections for the state and the region and would not require the construction of new regional energy production facilities. Therefore, energy impacts related to fuel consumption/efficiency during Project operations would be ***less than significant.***

Impact Summary

As described above, the Project would result in less than significant impacts on the wasteful, inefficient, or unnecessary use of energy due to compliance with County development standards and regulations that apply to the Project such as Title 24 Building Energy Efficiency Standards and the California Green Building Standards Code that apply to industrial buildings. Furthermore, various federal and state regulations including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program would serve to reduce the transportation fuel demand by the Project.

With the adherence to the increasingly stringent building and vehicle efficiency standards, the proposed Project would not contribute to a cumulative impact to the wasteful or inefficient use of energy. As such, the Project would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. A summary of the Project's estimated operational energy consumption is provided in Table 3.6-4.

Table 3.6-4
Operational Energy Consumption[17]

Activity	Variable	Consumption Rate	Consumption Amount
Electricity	Building Size (square feet)	kWh/sf/year	2,987 MWh/year
Natural Gas - Building		kBtu/sf/year	3,707,900 kBtu/year
Natural Gas – Stationary Equipment	Fuel Rate per Unit	Dryers 13 27 MMbtu/hr for 42 days	290.8Mcf/year
		Warmer 1.2 MMBtu/hr Roaster 4.35 MMBtu/hr	26.2 Mcf/year
Water Supply, Treatment, and Conveyance and Wastewater Treatment	Water Use (Mgal)	68.12 Mgal/yr	368,000 kWh/year
Transportation	VMT/year mpg all Fuels	VMT/year = 1,970,718 miles mpg = 13.7 (all classes)	143,353 gallons/year Transportation Fuels
Transportation – LNG Fuel Hauling in Year 1	VMT/year mpg – diesel	VMT/year = 12,768 mi. mpg = 7.2 (HHDT)	1,767 gallons Diesel (year 1 only)
Yard Trucks	VMT/year mpg – diesel	VMT/year = 3,265 mi. mpg = 7.2	3,618 gallons/year Diesel

[17] Energy Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. December 2020. See Appendix D. Pages 11-12.

Activity	Variable	Consumption Rate	Consumption Amount
Propane Fork Lifts	Hours/year Hours/gallon	Hours/year = 3,760 Hours/Gal. = 3.57	13,423 gallons/year
Tractor	Hour/year Engine horsepower	Gal./HP-Hour = 0.05 Hours/Year = 2,016	4,618 gallons/year Diesel
Emergency Diesel Generator	Engine horsepower Hours of Operation	9.7 gallons/hr 100 hrs/year	970 gallons/year Diesel
Notes: MPG = miles per gallon Mcf = million cubic feet VMT = vehicle miles traveled kW = kilowatts kWh = kilowatt-hours MWh = megawatt-hours MMBTU = million British thermal units Source of data for energy use and VMT: CalEEMod 2016.3.2. Source of Fresno County MPG for 2021: EMFAC 2017. Modeling results are provided in Appendix D.			

For these reasons, the Project would not result in the unnecessary, inefficient, or wasteful use of energy resources. This impact would be ***less than significant***.

Mitigation Measures

None Required.

Impact 3.6-2: *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less Than Significant. The County of Fresno has not adopted a local plan that promotes renewable energy and energy efficiency. Therefore, the analysis assesses the project's impact on State of California energy plans.

The Project was reviewed for consistency with several State of California energy plans and energy related plans. The ARB 2008 Scoping Plan required by AB 32 and the ARB 2017 Scoping Plan provide the State's strategy for achieving legislated GHG reduction targets.[18] Although the primary purpose of the Scoping Plans is to reduce GHG emissions, the strategies to achieve the GHG reduction targets rely on the use of increasing amounts of renewable fuels under the LCFS and RPS, and energy efficiency with updates to Title 24 and the CalGreen Code. The Project will comply with these regulations and would not conflict with or obstruct the ARB Scoping Plans.

The 2019 California Energy Efficiency Action Plan addresses issues pertaining to energy efficiency in California's buildings, industrial, and agricultural sectors. The 2019 California Energy Efficiency Action Plan (2019 EE Action Plan) is the state's roadmap for an energy-efficient and low-carbon future for buildings. Energy efficiency is a key piece of California's efforts to lessen the impacts of climate change, reduce the economic burden of energy consumption on low-income populations, and complement sustainability efforts in the state. The California Energy Commission's (CEC) 2019 EE Action Plan charts the progress toward doubling energy efficiency savings in buildings, industry, and agriculture; achieving increased energy efficiency in existing buildings; and reducing greenhouse gas emissions (GHGs) from buildings. Through robust, sustainable marketplaces, California can achieve its energy and climate goals and deliver benefits to California residents.[19] The EE Action Plan will be implemented through State programs and regulations.

Buildings constructed to implement the Project will meet the latest efficiency standards. The Project will be subject to 2019 Title 24 Building Energy Efficiency Standards. Vehicles and equipment will meet the latest fuel efficiency standards and use fuels subject to the LCFS. The Project will be installing the latest most efficient pistachio processing equipment that will contribute to meeting the State's energy efficiency goals. The Project will serve a large pistachio growing area and will provide processing facilities that require shorter travel distances from the farms than under current conditions and would reduce transportation related energy use.

The Project is consistent with applicable plans and policies and would not result in wasteful or inefficient use of nonrenewable energy sources; therefore, impacts would be less than significant.

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[18] Energy Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. December 2020. See Appendix D. Page 12.

[19] Energy Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. December 2020. See Appendix D. Page 13.

The impact is ***less than significant.***

Mitigation Measures

None Required.

Cumulative Impacts

Less Than Cumulatively Considerable. Development associated with buildout of the proposed Project would require the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. As discussed above, new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which could decrease estimated electricity and natural gas consumption in new and retrofitted structures. Furthermore, energy consumed by development in the Project area would continue to be subject to the regulations described in the Regulatory Setting of this Section. For these reasons, the electrical and natural gas energy that would be consumed by the Project is not considered unnecessary, inefficient, or wasteful. Impacts are ***less than cumulatively considerable.***

3.7 Geology/Soils

This section of the DEIR identifies potential impacts of implementing the proposed Project on geology and soils. The data utilized for analysis of this section is based, in part, on the Geotechnical Feasibility Report prepared for this Project by RMA Geoscience (Appendix E). No NOP comment letters were received pertaining to this topic.

Environmental Setting

Geologic Setting

The Project site is located in the central-western part of the San Joaquin Valley, which comprises the southern half of the Great Valley geomorphic province. The Valley is a westward-tilting trough which forms a broad alluvial fan, approximately 200 miles long and 50 to 70 miles wide, where the eastern flank is broad and gently inclined, as opposed to the western flank which is relatively narrow (Bartow, 1991; Page, 1968). The Central Valley consists of the Great Valley Sequence, overlain by Cenozoic alluvium. Underlying the Great Valley Sequence are the Franciscan Assemblage to the west and the Sierra Nevada batholith to the east (Bailey, Irwin, and Jones, 1964). The Franciscan Assemblage, made up of deformed and high pressure and low temperature metamorphosed mafic and ultramafic rocks, was formed around the Late Jurassic through the Miocene (160 to about 20 million years ago) by the offscraping of rocks from a subducting plate dipping to the east (Wakabayashi, 1992; Wakabayashi, 2010).

The Sierra Nevada started to form during the Early Jurassic (around 200 million years ago) when the Farallon Plate began subducting under the North American Plate. This subduction resulted in several orogenies, or mountain building events, that created the granitic Sierra Nevada Batholith deep below the surface. During the Miocene (around 10 million years ago), vertical movement along the Sierra Nevada Frontal Fault Zone (part of the Eastern California Shear Zone) began to uplift the Sierra Nevada. This uplift and erosion exposed the batholiths to the surface. From the Pleistocene (commonly known as the last Ice Age) to the present, glaciers have been carving out many parts of the Sierras. The current uplift of the Sierra Nevada is 1 - 2mm per year (Hammond, et al. 2012).

The Great Valley Sequence is a 40,000-foot sequence of marine shale, sandstone, and conglomerate beds, deposited in a deep marine environment during the Late Jurassic through the Cretaceous (150 – 65 million years ago). Overlying the Great Valley Sequence is several thousand feet of Cenozoic alluvium, deposited by: streams and rivers draining from the mountains and creating alluvial fans; by lakes that covered parts of the valley floor from time to time; flooding;

and marsh environments (Page, 1986). In some places, it is thousands of feet thick, and more than half of this thickness is composed of fine grained fluvial and lacustrine deposits. Holocene deposition consists mainly of episodic deposition of alluvial sediments (Bartow, 1991; Page, 1986). The Project site is situated on Quaternary fan deposits and older marine sediments that are several thousand feet deep.[1]

Topography

The Project site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses. The site is generally flat, with no substantial landforms. In late 2019, grading, excavation, foundation installation, crushed asphalt deposition and the placement of two storage silos and other structures occurred, primarily within the northern 80 acres of APN 038-300-17S. Thus, the environmental baseline for evaluating potential Project impacts is June 1, 2019, which is prior to the development of existing improvements on the site. Prior to June 1, 2019, there was light growth of drying seasonal grasses and weeds. The existing ground surface elevation varies from approximately 362 feet to approximately 393 feet, with a slight slope to the northeast. Aerial photos indicate the site has been used as agricultural land since at least 1994.

Soils

RMA Geoscience performed soil test borings within the Project site. The soils encountered in the test borings consisted primarily of sandy clay and clayey sand with occasional layers or zones of silty sand, poorly graded sand, and sandy silt. The consistency of the soils was predominantly medium dense for sandy soils and medium stiff to hard for the silty and clayey soils. At Boring B-2, there were loose zones from 8 to 13.5 feet and 18 to 22 feet. The soils encountered in the test borings are related to alluvial deposits that are estimated to be several thousand feet deep in the vicinity of the Project site.

Expansive Soils

The field exploration and laboratory testing program indicated that the near-surface soils have a medium expansion potential (Plasticity Index of 22).[2]

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[1] *Final Geotechnical Feasibility Report* (2020), RMA Geoscience, page 2.

[2] Ibid. Page 5.

Faults

The subject site is not located within the boundaries of an Earthquake Fault Zone for fault rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act and no faults are known to pass through the property. The nearest active earthquake fault zones (evidence of displacement within the past 11,700 years) are the Nunez Fault , the Ortigalita Fault Zone, and the San Andreas Fault Zone located approximately 20 miles south, 30 miles south, and 31 miles southwest, respectively, of the Project site.[3]

Asbestos

The term "asbestos" is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth's surface. The metamorphic rock serpentinite is a common product of the alteration process. The Department of Conservation Division of Mines and Geology has mapped naturally occurring asbestos in Fresno County. There are no mapped deposits of naturally occurring asbestos within the Project area. The nearest deposits are located over eight miles south of the Project site in the foothills located west of Interstate 5.[4]

Regulatory Setting

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

[3] *Final Geotechnical Feasibility Report* (2020), RMA Geoscience, page 5.

[4] https://www.arcgis.com/apps/webappviewer/index.html?id=da4b648958844134adc25ff002dbea1c (accessed October 2020).

Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results.

The NEHRPA designates FEMA as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

State Regulations

Seismic Hazards Mapping Act

"Under the Seismic Hazards Mapping Act, the State Geologist is responsible for identifying and mapping seismic hazards zones as part of the California Geologic Survey (CGS). The CGS provides zoning maps of non-surface rupture earthquake hazards (including liquefaction and seismically induced landslides) to local governments for planning purposes. These maps are intended to protect the public from the risks associated with strong ground shaking, liquefaction, landslides or other ground failure, and other hazards caused by earthquakes. For projects within seismic hazard zones, the Seismic Hazards Mapping Act requires developers to conduct geological investigations and incorporate appropriate mitigation measures into project designs before building permits are issued."

California Building Code

"The California Building Code" is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.

Local Regulations

Fresno County General Plan

The following lists goals and policies from the Fresno County 2000 General Plan pertaining to geology and soils that are applicable to the proposed Project.

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, ground shaking, lateral spreading, lurch cracking, 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 [CCR]) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety.

Policy HS-D.7: The County shall ensure compliance with state seismic and building standards in the evaluation, design, and siting of critical facilities, including police and fire stations, school facilities, hospitals, hazardous material manufacture and storage facilities, bridges, large public assembly halls, and other structures subject to special seismic safety design requirements.

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.

Goal OS-J: To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment.

Policy OS-J.1: The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, 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 archeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.

Fresno County Grading Ordinance (Section 7002)

The Fresno County Grading Ordinance stipulates safety and environmental control measures for construction practices. The ordinance sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments. The ordinance also establishes the administrative procedure for issuance of permits and provides for approval of plans and inspection of grading construction. All grading activities are required to be permitted by the County's building official except for those indicated in the ordinance. The ordinance also sets forth other requirements that must be met before any permit is issued. The County requires erosion control measures and inspections to be made by the building official.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- 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?

- Strong seismic ground shaking?
- Seismic-related ground failure, including liquefaction?
- Landslides?

- Result in substantial soil erosion or the loss of topsoil?
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Impacts and Mitigation Measures

Impact 3.7-1: *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Less Than Significant. As previously discussed, a Geotechnical Feasibility Report was prepared for the proposed Project (Appendix E). This impact analysis evaluates the proposed Project's potential to expose persons or structures to seismic hazards (fault rupture, ground shaking,

ground failure, and landsliding). Each of these hazards and their potential environmental impacts are discussed below.

Fault Rupture

The Geotechnical Feasibility Report determined that the site is not located within the boundaries of an Earthquake Fault Zone for fault rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act and no faults are known to pass through the property. The nearest active earthquake fault zones (evidence of displacement within the past 11,700 years) are the Nunez Fault , the Ortigalita Fault Zone, and the San Andreas Fault Zone located approximately 20 miles south, 30 miles south, and 31 miles southwest, respectively, of the Project site.[5] According to the Geotechnical Feasibility Report, there is no significant risk of ground rupture and therefore this impact is determined to be ***less than significant.***

Strong Ground Shaking

As required by Fresno County General Plan Policy HS-D.3, a Geotechnical Feasibility Report was prepared for the Project. This is a requirement for areas subject to strong seismic shaking, liquefaction, settlement, and subsidence hazards. In accordance with Fresno County General Plan Policy HS-D.3, the site-specific soils engineering and geologic-seismic analysis was prepared by a California-registered engineer or certified engineering geologist prior to construction of the proposed Project. The Geotechnical Feasibility Report included recommendations for site preparation and fill placement related to the Project site plan.[6] Therefore, with foundation and structural design in accordance with the Fresno County General Plan and current California Building Code (CBC) standards, along with implementation of the recommendations included in the Geotechnical Feasibility Report, ground shaking impacts on the proposed Project area would be ***less than significant.***

Seismic Related Ground Failure (including Liquefaction)

Liquefaction is a phenomenon where earthquake-induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. The possibility of liquefaction is dependent upon grain size, relative density, confining pressure,

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[5] *Final Geotechnical Feasibility Report* (2020), RMA Geoscience, page 5.

[6] Ibid, page 8.

saturation of the soils, and intensity and duration of ground shaking. In order for liquefaction to occur, three criteria must be met: "low density", coarse-grained (sandy) soils, a groundwater depth of less than about 50 feet, and a potential for seismic shaking from nearby large-magnitude earthquake. Since the depth to groundwater at the project site is 450 feet bgs, there is a negligible risk of liquefaction occurring at the Project site during a design level seismic event. Therefore, the impact is considered ***less than significant.***

Landsliding

There are no substantial slopes on or near the Project site. Therefore, the opportunity for slope failure in response to the long-term geologic cycle of uplift, mass wasting, and difference of slopes is unlikely. Compliance with the recommendations in the Geotechnical Feasibility Report and all applicable seismic design standards of the California Building Standards Code would ensure that design features would not present a hazard involving landslides. Therefore, the impact is considered ***less than significant.***

Mitigation Measures

None are required.

Impact 3.7-2: *Result in substantial soil erosion or the loss of topsoil?*

Less Than Significant Impact With Mitigation. The soils encountered in the test borings on the Project site consisted primarily of sandy clay and clayey sand with occasional layers or zones of silty sand, poorly graded sand, and sandy silt. The consistency of the soils was predominantly medium dense for sandy soils and medium stiff to hard for the silty and clayey soils. The soils encountered in the test borings are related to alluvial deposits that are estimated to be several thousand feet deep in the vicinity of the Project site.

Construction activities associated with the Project involves ground preparation work for the proposed development of the site. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the Project site.

Grading of the Project site would be minimized and would follow the existing topography of the Project site to the greatest extent feasible to limit potential erosion and maintain existing drainage patterns. The temporary and permanent site roadways would be graded and compacted prior to road construction. Any existing vegetation would be scarified and grubbed for the development of temporary and permanent access roads, and the soil surface would be smoothed, moisture

conditioned, and compacted with a crown in the center and swale on the side to prepare the roadway surface. Grading, excavation, removal of vegetation cover, development of access roads, and disturbance of soils during construction activities would result in the disturbance of an area greater than 1 acre and would temporarily increase erosion, runoff, and sedimentation. Construction activities would also result in soil compaction and wind erosion effects that could adversely affect soils at the construction sites and staging areas.

During grading, erosion prevention measures would be implemented, including the separation of topsoil, whereby topsoil is separated and stockpiled separately from subsoil and stabilized to prevent erosion. When Project construction is complete, stripped subsoil and topsoil would be replaced as required. Other erosion and sediment control measures would include watering for dust control and soil compaction during grading and throughout construction activities.

The Applicant and/or contractor would be required to employ appropriate sediment and erosion control BMPs as part of a Stormwater Pollution Prevention Plan (SWPPP) that would be required and submitted to the Central Valley Regional Water Quality Control Board (Central Valley RWQCB) in accordance with the National Pollution Discharge Elimination System (NPDES). In addition, soil erosion and loss of topsoil would be minimized through implementation of the San Joaquin Valley Air Pollution Control District (SJVAPCD) fugitive dust control measures (See Section 3.3 – Air Quality). Once construction is complete, the Project would not result in significant soil erosion or loss of topsoil. Mitigation Measure GEO – 1 (requirement to prepare a SWPPP) will ensure that impacts remain ***less than significant.***

Mitigation Measures:

GEO – 1 In order to reduce on-site erosion due to project construction and operation, an erosion control plan and Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for the site preparation, construction, and post-construction periods by a registered civil engineer or certified professional. The erosion control plan shall incorporate best management practices consistent with the requirements of the National Pollution Discharge Elimination System (NPDES). The erosion component of the plan must at least meet the requirements of the SWPPP required by the Central Valley RWQCB. If earth disturbing activities are proposed between October 15 and April 15, these activities shall be limited to the extent feasible to minimize potential erosion related impacts. Additional erosion control measures shall be implemented in consultation with the County of Fresno. Prior to the issuance of any permit, the project proponent shall submit detailed plans to the satisfaction of the County of Fresno. The components

of the erosion control plan and SWPPP shall be monitored for effectiveness by County of Fresno. Erosion control measures may include, but not be limited to, the following:

- **i.** Limit disturbance of soils and vegetation disturbance removal to the minimum area necessary for access and construction;
- **ii.** Confine all vehicular traffic associated with construction to the right-of-way of designated access roads;
- **iii.** Adhere to construction schedules designed to avoid periods of heavy precipitation or high winds;
- **iv.** Ensure that all exposed soil is provided with temporary drainage and soil protection when construction activity is shut down during the winter periods; and
- **v.** Inform construction personnel prior to construction and periodically during construction activities of environmental concerns, pertinent laws and regulations, and elements of the proposed erosion control measures.

Impact 3.7-3: *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less Than Significant Impact. As previously discussed herein, the proposed Project would not be located within an area identified as a landslide hazard area. The proposed Project is located on relatively flat agricultural fields, and the threat of a landslide occurring on or adjacent to the project site is considered low. Therefore, potential impacts associated with landslides would be ***less than significant.***

The proposed Project would be located on soils that exhibit low to moderate potential for liquefaction during an earthquake, and the potential for lateral spreading to occur is considered low. The site would be designed in accordance with engineering design standards and structural improvement requirements to withstand the effects of soil settlement and collapsible soils. Engineered compacted fill would likely be used during construction in accordance with building code requirements, which would reduce the potential for lateral spreading of soils from Project construction. The Geotechnical Feasibility Report included recommendations for site preparation and fill placement related to the Project site plan. Therefore, with foundation and structural design in accordance with the Fresno County General Plan and current CBC standards, along with implementation of the recommendations included in the Geotechnical Feasibility Report, ground shaking impacts on the proposed Project area would be ***less than significant.***

Mitigation Measures

None are required.

Impact 3.7-4: *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Less Than Significant Impact. As previously described, the soils present on the Project site have low to moderate potential for expansion. As discussed under Impact 3.7-3 above, the proposed Project would be designed in accordance with all applicable building code requirements and structural improvement requirements, which would also address expansive soil hazards. Engineered compacted fill would likely be used during construction in accordance with building code requirements, which would reduce the potential for impacts from expansive soil on Project development. The Geotechnical Feasibility Report included recommendations for site preparation and fill placement related to the Project site plan. Therefore, with foundation and structural design in accordance with the Fresno County General Plan and current CBC standards, along with implementation of the recommendations included in the Geotechnical Feasibility Report, impacts from expansive soil on the proposed Project would be ***less than significant.***

Mitigation Measures

None are required.

Impact 3.7-5: *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The proposed Project would install five septic systems for employee waste. The installation of a septic system is regulated and monitored by the Fresno County Department of Public Works and Planning (FCPWP). FCPWP's *Onsite Wastewater Treatment System Guidance Manual* (Manual) provides the procedural and technical details for implementation of the provisions of the Fresno Local Agency Management Plan (LAMP) codified in Chapter 15.20 of the Fresno County General Ordinance Code. The provisions within the 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, include Onsite Wastewater Treatment Systems as defined by the Water Quality Control Policy for Siting, Design, Operation and Maintenance of

Onsite Wastewater Treatment Systems (State OWTS Policy), adopted by the State Water Resources Control Board, and which took effect on May 13, 2013. The Fresno County Department of Public Works and Planning, Development Services and Capital Projects Division, (Department), is the agency responsible for the enforcement of the Ordinance and provisions in the Manual. The Central Valley RWQCB is the state agency responsible for the protection of groundwater and surface water quality in Fresno County. While the Department administers the local program, the Central Valley 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, FCPWP requires that soil profiles and percolation tests be performed. The final design will be based off the percolation testing results, ensuring that the soils at the proposed Project site will support the use of the septic systems. By complying with existing FCPWP regulations/permit requirements through Project design features, the impact is considered ***less than significant.***

Mitigation Measures

None are required.

Impact 3.7-6: *Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Less than Significant Impact with Mitigation. Paleontological resources are valued for the information they yield about the history of the earth and its past ecological settings. A review of the cultural and historical resources was provided in Section 3.5 and 3.17, Cultural Resources and Tribal Resources, respectively. There are currently no unique geologic features located in the Project Area.

While the discovery of paleontological resources within the Project footprint is considered unlikely, Project buildout would adhere to California Public Resources Code Section 21083.2 which requires all earth-disturbing work to be temporarily suspended or redirected until a qualified paleontologist has evaluated the nature and significance of the records, in accordance with federal, State, and local guidelines. In addition, Mitigation Measure CUL-1 would be implemented in the case of any inadvertent discoveries. With adherence to these regulatory requirements and measures, impacts would be ***less than significant***.

Mitigation Measure

CUL-1, as described in Section 3.5.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to geology and soils is generally site-specific rather than cumulative in nature because each project site has different geological considerations that would be subject to review. Construction of the individual development projects allowed under the Fresno County General Plan may result in risks associated with geology and soils. For example, there will always be a chance that a fault located anywhere in the state (or region) could rupture and cause seismic ground shaking. Additionally, grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.

While some cumulative impacts may occur in the region as individual projects are constructed, the County's General Plan goals, objectives and action plans, as well as State and federal regulations, will reduce the risk to people in the region. Considering the protection granted by local, state, and federal agencies and their requirements for the seismic design, as discussed above, the overall cumulative impact would not be significant. The proposed project's incremental contribution to cumulative geologic and soil impacts would be ***less than cumulatively considerable***.

3.8 Greenhouse Gas Emissions

This section discusses regional greenhouse gas (GHG) emissions and climate change impacts that could result from implementation of the proposed Project. This section provides a background discussion of greenhouse gases and effects of global climate change and organized with an existing setting, regulatory setting, and impact analysis. The information and analysis presented in this Section are based on the Air Quality and Greenhouse Gas Analysis Reports (AQGGA) prepared for this Project by Mitchell Air Quality Consulting. The full AQGGA can be reviewed in Appendix A. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.[1] The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the project participates in the potential for global climate change by its

[1] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 35.

incremental contribution of GHGs—and when combined with the cumulative increase of all other sources of GHGs—constitute potential influences on global climate change.

Consequences of Climate Change in California

In California, climate change may result in consequences such as the following[2]:

- **Reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.

- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.

- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate

[2] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 35-36.

coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

- **An increase in temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Consequences of Climate Change in the Project Area

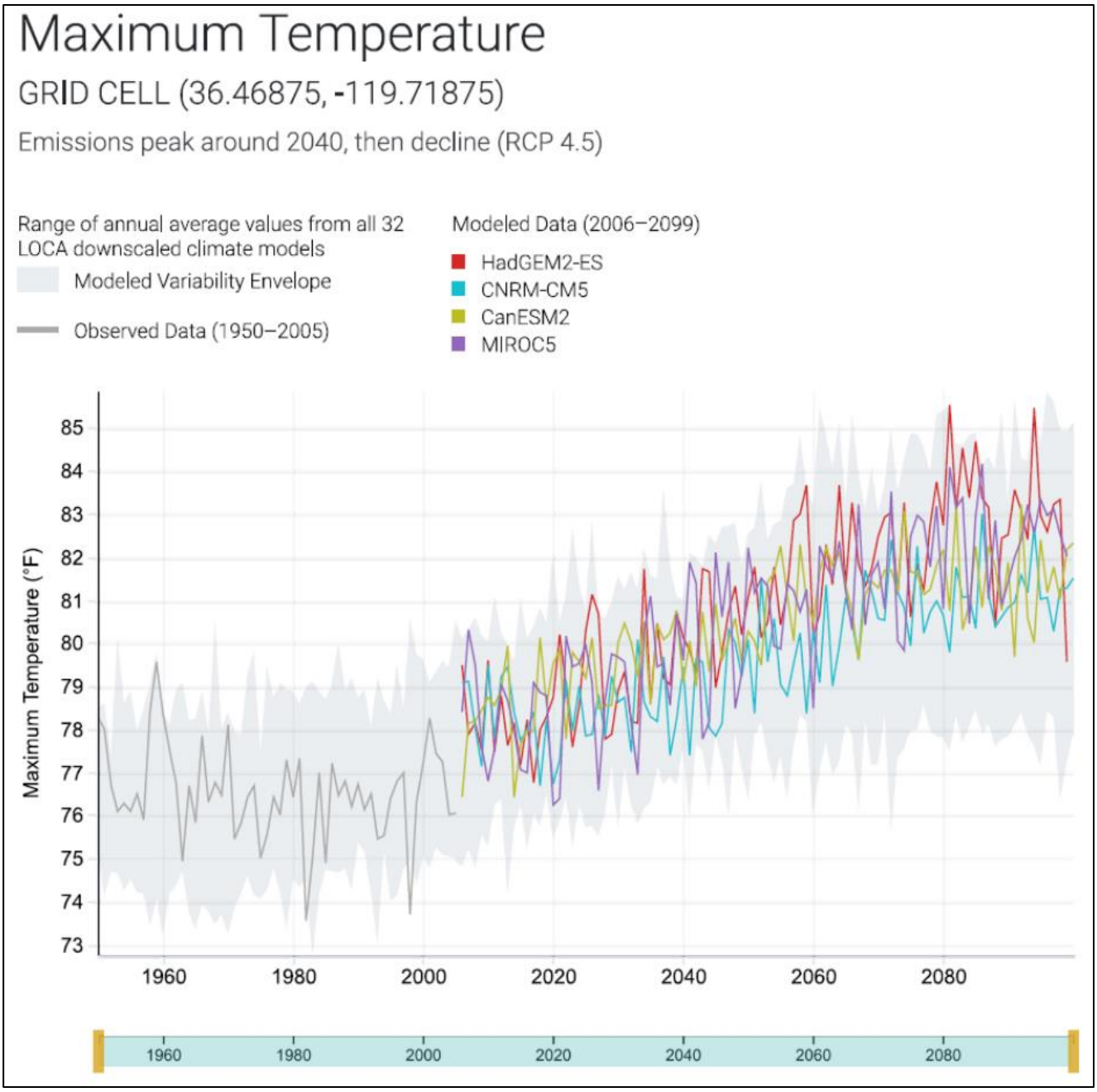
Error! Reference source not found. displays a chart of measured historical and projected annual average maximum temperatures in the Project area. As shown in the figure, temperatures are expected to rise in all models used for the analysis. The results indicate that the annual mean temperatures are predicted to increase by 5.6 degrees Fahrenheit (°F) based on the 2070 to 2099 projections from a 1965 to 1990 baseline.[3]

Water Supply. Surface water will be used to provide water for the proposed Project. The availability of surface water available could decline if climate change results in reduced snowpack in the Sierra Nevada and less surface water is available for farming and other activities.

Wildfires. The Project site is in an irrigated agricultural area with limited fuels that would not be subject to a wildfire. The potential for increased temperatures and drought conditions due to climate change would result in increased risk from wildfire in foothill and mountain areas of Fresno County that are distant from the Project site.

[3] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 36.

Figure 3.8-1
Observed and Projected Temperatures for Climate Change in the Project Area[4]



[4] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 37.

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects to human health.

In its report, Global Climate Change Impacts in the U.S. (2009), the U.S. Global Change Research Program has analyzed the degree to which impacts on human health are expected to impact the United States.

- Potential effects of climate change on public health include:
- Direct Temperature Effects: Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- Extreme Events: Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- Climate-Sensitive Diseases: Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- Air Quality: Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution.[5]

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide (CO_2), methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen.[6]

[5] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 38.
[6] Ibid.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, CO_2, methane, NO_X, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2.

Individual GHG compounds have varying global warming potential and atmospheric lifetimes. CO_2, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. GHGs defined by Assembly Bill (AB) 32 (see the Climate Change Regulatory Environment section for a description) include CO_2, CH_4, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 3.8-1. A seventh GHG, nitrogen trifluoride, was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. The global warming potential amounts are from IPCC Fourth Assessment Report (AR4). The new amounts have been incorporated into the CalEEMod 2016.3.2 used in this analysis.

Table 3.8-1
Description of Greenhouse Gases[7]

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 124 to 14,800.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from7,390 to 12,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has	This gas is man-made and used for insulation in electric power transmission equipment, in the magnesium industry, in

[7] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 39.

Greenhouse Gas	Description and Physical Properties	Sources
	a high global warming potential of 22,800.	semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.

The State has begun the process of addressing pollutants referred to as short-lived climate pollutants. Senate Bill (SB) 605, approved by the governor on September 14, 2014 required the ARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. ARB was required to complete an emission inventory of these pollutants, identify research needs, identify existing and potential new control measures that offer co-benefits, and coordinated with other state agencies and districts to develop measures. The Short Lived Climate Pollutant Strategy was approved by the ARB in March 2017. The strategy calls for reductions of 50 percent from black carbon, 40 percent from methane, and 40 percent from HFCs from the 2030 Business as Usual (BAU) inventory for these pollutants.[8]

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in **Error! Reference source not found.** and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, ARB will include it in its comprehensive strategy.[9]

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted, so its precursor emissions—VOC and NO_X on a regional scale and CH_4 on a hemispheric scale—will be subject of the strategy.[10]

Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from

[8] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 39-40.
[9] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 40.
[10] Ibid.

biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, whereas other GHGs can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources. Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other greenhouse gases, such that the warming brought about by increased CO_2 allows more water vapor to enter the atmosphere.[11]

Emissions Inventories

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 43,286 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2012. As shown in Figure 3.8-2, China was the largest GHG emitter with over 10 billion metric tons of CO_2e, and the United States was the second largest GHG emitter with over 6 billion metric tons of CO_2e.[12]

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[11] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 40.
[12] Ibid.

Figure 3.8-2
Greenhouse Gas Emission Trends[13]

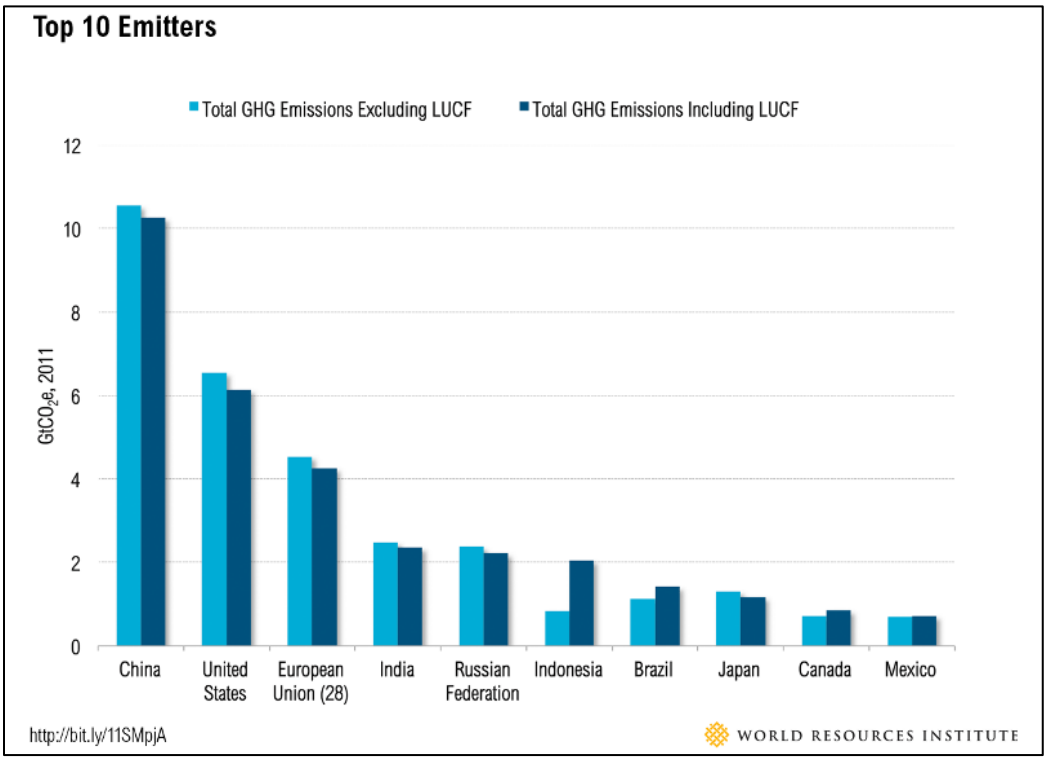
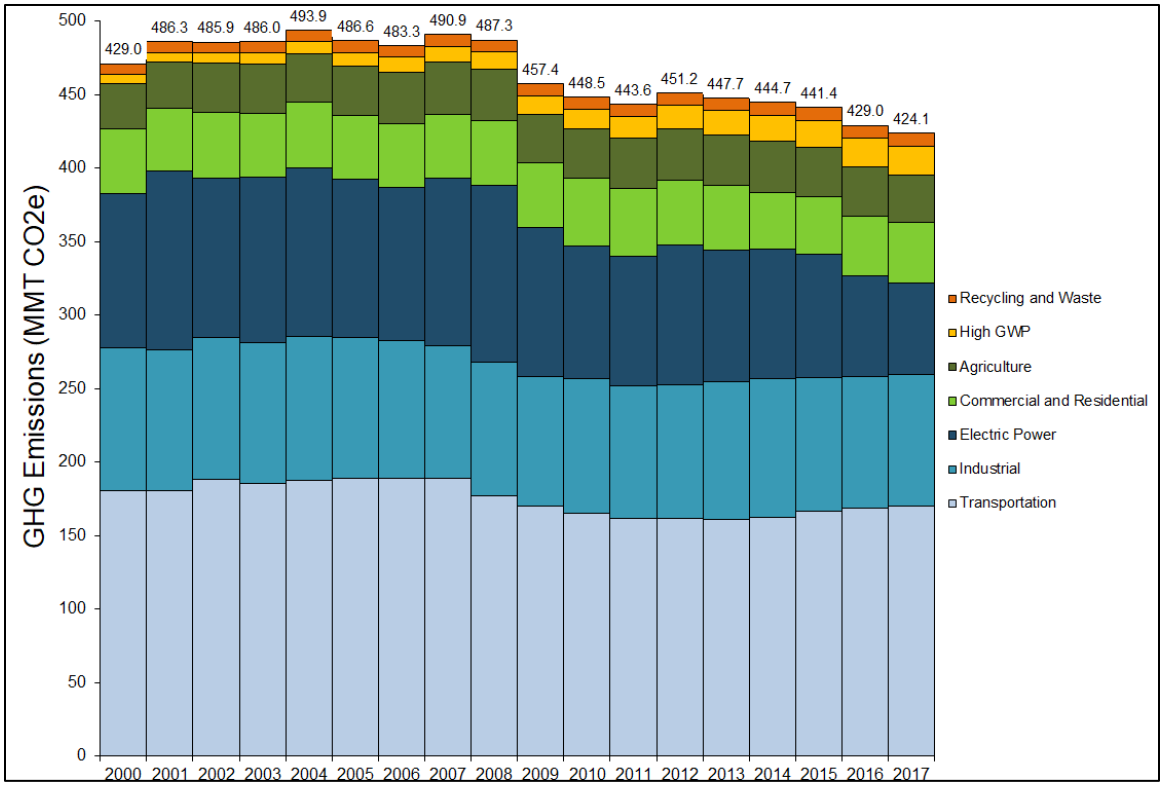


Figure 3.8-3 shows the contributors of GHG emissions in California between years 2000 and 2017 by Scoping Plan category. The main contributor was transportation. The second-highest sector was industrial, which includes sources from refineries, general fuel use, oil and gas extraction, cement plants, and cogeneration heat output. ARB reported that California's GHG emissions inventory was 424.1 $MMTCO_2e$ in 2017. This amount is below the State's 2020 emission target of 431 $MMTCO_2e$.[14]

[13] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 41.
[14] Ibid.

Figure 3.8-3
Greenhouse Gas Emission Trends by Scoping Plan Category in California[15]



Regulatory Setting

International Regulations

Intergovernmental Panel on Climate Change

In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change. The panel was tasked with assessing the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

[15] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 41.

United Nations Framework Convention on Climate Change (Convention)

On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at average of five percent against 1990 levels over the five-year period from 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

Paris Agreement

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating in a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen those efforts in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or COP 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;

- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.[16]

Between June 1, 2017 and January 20, 2021, the United States had temporarily withdrawn from the Paris Climate Agreement.

Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Greenhouse Gas Endangerment

Massachusetts v. EPA (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the U.S. Environmental Protection Agency (EPA) regulate four GHGs, including CO_2, under Section 202(a)(1) of the

[16] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 43.

Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding the EPA Administrator findings.[17]

Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

Mandatory Reporting of Greenhouse Gases

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[17] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 44.

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review

The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs, which will define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

<u>State of California Regulations</u>

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark Assembly Bill (AB) 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, methane, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The California Air Resources Board (ARB) approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a BAU scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations. At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.[18]

[18] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 47.

ARB Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed Cap-and-Trade Program. The Scoping Plan states that the inclusion of these emissions within the Cap-and-Trade Program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the Cap-and-Trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.

The Scoping Plan included no measures that would apply to pistachio processing operations. Scoping Plan Measure No. A-1—Methane Capture at Large Dairies is the only agricultural measure that was assigned an emission reduction target (1.0 $MMTCO_2e$ in 2020). Emissions of nitrous oxide (N_2O) from nitrogen fertilizers was expected to be the subject of research to

understand the variables affecting fertilizer N_2O emissions and based on the findings, the ARB would explore opportunities for reductions.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities Climate for the next several years. The Update does not set new targets for the State, but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050. The Update includes an estimate that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal.

Cap-and-Trade Program. The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's Cap-and-Trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015.[19]

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are guaranteed only on an accumulative basis. As summarized by ARB in the First Update:

The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can

[19] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 48.

cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.[20]

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

AB 398. The Governor signed AB 398 on July 25, 2017 to extend the Cap-and-Trade Program to 2030. The legislation includes provisions to ensure that offsets used by sources are limited to 4 percent of their compliance obligation from 2021 through 2025 and 6 percent from 2026 through

[20] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 49.

2030. AB 398 also prevents Air Districts from adopting or implementing emission reduction rules from stationary sources that are also subject to the Cap-and-Trade Program.[21]

SB 32. The Governor signed SB 32 on September 8, 2016. SB 32 gives ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the next Scoping Plan update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

ARB approved the 2017 Scoping Plan Update in December 2017. The Scoping Plan Update provides the emission inventories and strategies that will enable cities and counties to develop local greenhouse gas targets and CEQA thresholds based on consistency with the 2030 State mandate.

1. SB 350
    - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
    - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
    - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
    - Maintaining existing GHG standards for light- and heavy-duty vehicles.
    - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
    - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
    - Improve freight system efficiency.

[21] Ibid..

- Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
- Deploy over 100,000 zero-emission trucks and equipment by 2030.

5. Short-Lived Climate Pollutant (SLCP) Reduction Strategy

- Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
- Reduce emissions of black carbon 50 percent below 2013 levels by 2030.

6. SB 375 Sustainable Communities Strategies

- Increased stringency of 2035 targets.

7. Post-2020 Cap-and-Trade Program

- Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
- ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

8. 20 percent reduction in greenhouse gas emissions from the refinery sector.

9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

SB 375—The Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375—as codified in Public Resources Code Section 21159.28—states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth-inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved Sustainable Communities Strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

The 2018 RTP/SCS was adopted by Fresno COG on July 26, 2018 and reflects its latest regional vehicle miles traveled (VMT) targets.[22]

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation, rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.[23]

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[22] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 51.
[23] Ibid.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles, and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per megawatt-hour (MWh).

SB 1078—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. In 2011, the state legislature adopted this higher standard in SB X1-2. Renewable sources of

electricity subject to the legislation include wind, small hydropower, solar, geothermal, biomass, and biogas.

SB 350—Clean Energy and Pollution Reduction Act of 2015. The legislature recently approved and the governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include: an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[24]

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

SB 100 California Renewable Portfolio Standard (2018). The goal of the program is to achieve that 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill approved by Governor Brown on September 10, 2018 would require that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total

[24] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 53.

kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. On June 1, 2005, former California Governor Arnold Schwarzenegger announced through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order S-01-07—Low Carbon Fuel Standard. The governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was subject to legal challenge in 2011. Ultimately, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Office of Administrative Law (OAL) approved the regulation on November 16, 2015.[25]

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Orders B-55-18 Carbon Neutrality by 2045 (2018). This Executive Order signed on September 10, 2018 sets a new statewide goal to achieve carbon neutrality as soon as possible,

[25] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 54.

and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the statewide targets of reducing greenhouse gas emissions.

California Building Codes

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

Title 20 Appliance Efficiency Regulations. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601–1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2018a).

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The most current 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017 (CEC 2016). The CEC adopted the 2019 Building Energy Efficiency Standards on May 9, 2018. The updated standards are effective as of January 1, 2020 (CEC 2018b).

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided the ordinances include a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction

and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for five percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for five percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Designated parking**. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling. (5.410.1).
- **Construction waste**. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
- The installation of water-conserving fixtures or
- Using nonpotable water systems (5.303.4).
- **Water use savings**. Twenty percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).

- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the ordinance through expedited regulation. The California Water Commission approved the revised ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

California Supreme Court GHG Ruling

In a November 30, 2015 ruling, the *California Supreme Court in Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project, concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25 to 27 of the ruling to address this issue summarized below.

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-

as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25).

- **Compliance with Regulatory Programs or Performance Based Standards**. "A lead agency might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.']).) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions.' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions']).)" (p. 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

Therefore, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the recently issued Newhall Ranch opinion, the GHG impacts would be considered significant if the project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) GHG Reduction Threshold; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.

<u>San Joaquin Valley Air Pollution Control District Regulations</u>

Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.
- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD's existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.[26]

The SJVAPCD's approach is intended to streamline the process of determining if project-specific GHG emissions would have a significant effect. Projects exempt from the requirements

[26] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 60.

of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources, and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as Best Performance Standards (BPS), to reduce GHG emissions. The BPS have not yet fully been established, though they must be designed to achieve a 29 percent reduction when compared with the BAU projections identified in ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. Thus, these standards would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The SJVAPCD has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction; storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to SJVAPCD guidance, quantification of GHG emissions

would be required for all projects for which the lead agency has determined that an environmental impact report is required, regardless of whether the project incorporates BPS. The SJVAPCD has not yet adopted BPS for development projects, so quantification of project emissions is required.[27]

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the SJVAPCD has pursued an alternative strategy that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. The SJVAPCD is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding (MOU) with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality greenhouse gas exchange for credits created in California. The GHG Rx is intended to help fulfill compliance obligations or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations. The SJVAPCD currently has no credits posted to the GHG Rx as of this writing.[28]

Rule 2301

While the Climate Change Action Plan indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301—Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

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[27] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 61.

[28] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 61.

- 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.

Local Regulations

Regional Transportation Plan

The Fresno Council of Governments (Fresno COG) is the Regional Transportation Planning Agency (RTPA) for the Fresno County region. The Fresno COG adopted the 2014 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) that included the County's first Sustainable Community Strategy to comply with SB 375. The RTP is a planning document prepared in cooperation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and other stakeholders, including transportation system users. 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. SB 375 includes the following four primary findings related to the RTP/SCS development process:

SB 375 required the ARB to develop regional GHG emission reduction targets for cars and light trucks for each of the 18 MPOs in California, including Fresno COG. ARB approved targets for the San Joaquin Valley in January 2013. The target for Fresno is a per capita reduction in GHG emissions from passenger vehicle travel of five percent by 2020 and 10 percent by 2035 relative to 2005 levels. However, the 2014 RTP/SCS includes a target of nine percent per capita reduction by 2020 and an 11 percent reduction by 2035 relative to 2005 levels. The 2018 RTP indicates that the County continues to pursue the 5 percent reduction by 2020 and 10 percent reduction by 2035.

SB 375 streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Fresno County SCS or APS (as determined by ARB) to achieve regional GHG emissions reduction target.

The 2018 RTP/SCS was adopted by Fresno COG on July 26, 2018 and reflects the latest regional VMT targets for Fresno COG of 5 percent by 2020, 10 percent by 2035 and 12 percent by 2042.[29]

Thresholds of Significance

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines effective December 28, 2018. A significant impact would occur if the project would:

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

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national 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.

While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the lead agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below and modeling assumptions and methodologies are provided in Appendix A.

[29] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 62.

Impacts and Mitigation Measures

Impact 3.8-1: *Would the project generate direct or indirect greenhouse emissions that would result in a significant impact on the environment?*

Less Than Significant. Section 15064.4(b) of the CEQA Guidelines' amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- Consideration #1: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Consideration #2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- Consideration #3: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Fresno County has not adopted its own GHG thresholds or prepared a Climate Action Plan that can be used as a basis for determining project significance; however, the SJVAPCD has adopted its Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as a Lead Agency. The SJVAPCD will approve discretionary permits for the project and is considered a Responsible Agency under CEQA. Under the SJVAPCD policy, the District would require stationary source projects with increased GHG emissions to implement performance-based standards, or otherwise demonstrate that project specific GHG emissions have been reduced or mitigated by at least 29 percent, as compared to Business-as-Usual. The SJVAPCD has identified best performance standards for a number of sources that have been pre-determined to meet the standard. In addition, the SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* includes thresholds based on whether the project will reduce or mitigate GHG levels by 29 percent from BAU levels compared with 2005 levels. This level of GHG reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008.

The First Update to the Climate Change Scoping Plan adopted in May 2014 provided revised inventory projections to reflect slower growth in emissions during the recession and lower future year projections. The State's 2020 BAU inventory was reduced from 596 $MMTCO_2e$ to 545 $MMTCO_2e$.[30] The new GHG reduction level for the State to reach 1990 emission levels by 2020 is 21.7 percent from BAU in 2020. The First Update to the Climate Change Scoping Plan also confirmed that the State is on track to achieve the 2020 target and to maintain and continue reductions beyond 2020 as required by AB 32. Therefore, the analysis uses a threshold based achieving a 21.7 percent reduction from BAU to demonstrate consistency with AB 32 and the approach recommended by the SJVAPCD. The analysis prepared for the Project also includes a qualitative assessment of compliance with Scoping Plan measures to support GHG significance findings under Impact GHG-2. The SJVAPCD defines BAU as the total baseline emissions for all emissions sources within the development type, projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period.

The State adopted the 2017 Scoping Plan Update on December 14, 2017 that provides the State's strategy to achieve the SB 32 2030 target of a 40 percent reduction in emissions compared to 1990 levels. The plan includes existing and new measures that when implemented are expected to achieve the SB 32 2030 target. The 2017 Scoping Plan includes substantial reductions beyond 2020 through continued implementation of existing regulations. Other regulations will be adopted to implement recently enacted legislation including SB 350, which requires an increase in renewable energy from 33 percent to 50 percent and doubling the efficiency of existing buildings by 2030. The Legislature extended the Cap-and-Trade Program through 2030. Cap-and-Trade provides a mechanism to make up shortfalls in other strategies if they occur. In addition, the strategy relies on reductions achieved in implementing the ARB Short-Lived Climate Pollutant (SLCP) Reduction Strategy to reduce pollutants not previously controlled for climate change such as black carbon, methane, and hydrofluorocarbons (HFCs).

The Project will commence operations after the 2020 AB 32 target year; however, no new quantitative target based on a reduction from BAU has been developed for the 2030 SB 32 target year. The 2017 Scoping Plan provides ranges of reductions for each plan strategy but does not provide readily accessible reduction estimates and assumptions for each measure that are needed to determine reductions attributable to each region and project. To address this issue, the analysis shows the amount of continued progress after 2020 by comparing 2021 and 2030 emissions with

[30] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 92.

BAU emissions. A qualitative assessment of compliance with the 2008 and the 2017 Scoping Plan measures is provided under Impact GHG-2.

Newhall Ranch

On November 30, 2015, the California Supreme Court issued its decision in *Newhall Ranch,* invalidating the GHG analysis for a large master planned residential development in Los Angeles County consisting of over 20,000 residential dwelling units and other uses. In particular, the Court upheld: (1) use of the statewide emissions reduction goal in AB 32 as a significance criterion (pp. 15–19), (2) use of the Scoping Plan's BAU model "as a comparative tool for evaluating efficiency and conservation efforts" of the Project (pp. 18–19), and (3) a comparison of the project's expected emissions to a BAU model rather than a baseline of pre-project conditions (pp. 15–19). The Court invalidated the GHG analysis on the grounds that the "administrative record discloses no substantial evidence that the Newhall Ranch's project-level reduction of 31 percent in comparison to [BAU] is consistent with achieving AB 32's statewide goal of a 29 percent reduction from [BAU]." The Court indicated that a lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25.) A lead agency "might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities."

The substantial evidence needed to support a project BAU threshold can be derived from data used to develop the Scoping Plan inventory and control strategy, and from analysis conducted by the ARB to track progress in achieving the AB 32 2020 target. The critical factor in determining the appropriate project threshold is whether the State requires additional reductions beyond those achieved by existing regulations in order to achieve its target. If no additional reductions are required from individual projects, no nexus exists to require a project to mitigate its emissions. In that case, the percentage reductions achieved by projects through compliance with regulations is the amount needed to reach the AB 32 target.

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted by the responsible agencies and the effectiveness of those regulations have been estimated by the agencies during the adoption process and then are tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will meet the 2020 target and achieve continued progress toward meeting post-2020 targets. Governor Brown, in the

introduction to Executive Order B-30-15, states "California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32)."

The Supreme Court was concerned that new development may need to do more than existing development to reduce greenhouse gases to demonstrate that it is doing its fair share of reductions. As will be shown below, new development does do more than existing development and, due to the nature of the sources of GHG emissions related to development, existing development is equally responsible for reducing emissions from the most important sources of emissions. It is important to note that most of the State's regulatory program applies to new and existing development.

The Scoping Plan reduction from BAU accounts for growth projected in the State and assumes that existing development would continue to emit GHGs at the same rate that occurred in the base year (2002–2004 average). The California Department of Finance Report E-5 predicts that population growth in California from 2005 to 2020 will be 13.2 percent. This means that development that existed in 2005 will produce nearly 87 percent of the State's emissions in 2020. Conversely, new development is only responsible for about 13 percent of the emissions generated during this timeframe. If measures to reduce emissions from existing development were not available, new development could not provide sufficient reductions to reach the 2020 target even if their emissions were reduced to net zero.

The State's regulatory program is able to target both new and existing development because the two most important strategies—motor vehicle fuel efficiency and emissions from electricity generation—obtain reductions equally from existing and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations, and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources, such as the Pavley standards, that apply to all vehicles purchased in California; the LCFS that applies to all fuel used in California; and the Renewable Portfolio Standard and Renewable Energy Standard that apply to utilities providing electricity to all California homes and businesses.

As described above, the State requires an average reduction from all sources of the emission inventory of about 22 percent. The Scoping Plan strategy will achieve more than average reductions from energy and mobile source sectors that are the primary sources related to development projects, and lower than average reductions from other sources such as agriculture. The amount of reduction estimated by the ARB for each sector was based on technical feasibility

and cost effectiveness. The Scoping Plan did not include any control strategies targeting the agricultural sector except for the voluntary use of anaerobic digesters on dairies.

As suggested by the Court, a project BAU analysis was prepared for this project that assesses "consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities." The analysis shows the extent to which the project complies with adopted regulations and the additional amount that will be achieved through project design features. At this point in time, no additional reductions are required from new development beyond regulations for the State to achieve its target. Therefore, this analysis meets the consistency test described by the Supreme Court.

Land use-related sources are analyzed separately from permitted stationary sources of emissions in this impact discussion. The stationary source measures are evaluated to determine if BPS will be applied to the Project and if no BPS has been identified for a source, the reductions from BAU are assessed. The land use-related sources such as motor vehicles, off-road equipment, and area sources are evaluated using a reduction from BAU approach. The analysis prepared for the Project also includes a qualitative assessment of compliance with Scoping Plan measures to support GHG significance findings under Impact GHG-2. There are no measures that identify specific requirements on agricultural industrial development projects, but the analysis shows how the applicable measures affect project emission sources.

Impact Analysis

Stationary Source Best Performance Standards Analysis

The Project includes stationary source emission units that will be required to obtain SJVAPCD permits and to comply with the GHG BPS policy. The Project includes thirteen 27-MMBtu/hr natural gas-fueled column dryers that would utilize 290.79 million cubic feet (CF) of natural gas per year. The SJVAPCD identified draft BPS for pistachio dryers in 2010. Use of dryers meeting BPS was estimated to result in an 8.1 percent reduction relative to baseline emissions. The Project includes natural gas warming and roasting equipment that is expected to use 26.2 million cubic feet of natural gas per year. The Project includes a 170 hp diesel emergency generator that is assumed to operate 100 hours per year for maintenance and testing. The stationary source GHG emissions are shown in Table 3.8-2.

Table 3.8-2
Stationary Source Greenhouse Gas Emissions[31]

Source	$MTCO_2e$ per year
Natural Gas Column Dryers	15,446.8
Natural Gas Warmer and Roaster	1,391.5
Diesel Emergency Generator (170 hp)	8.6
Total	**16,846.9**

The facility is not subject to EPA Mandatory Reporting of Greenhouse Gases Rule. Only facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

Construction

Total GHG emissions generated during all phases of construction were combined and are presented in Table 3.8-3. The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the SCAQMD and the SMAQMD, have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (non-residential—30 years) and added to the operational emissions. The Project would use liquified natural gas (LNG) hauled by trucks during the first year of operation. The emissions from the haul trucks are temporary; therefore, the emissions were amortized and added to the construction emissions for accounting purposes.

[31] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 95

Table 3.8-3
Construction Greenhouse Gas Emissions[32]

Year	$MTCO_2e$ per year
2021	502.2
Temporary LNG Truck Trips 2021	18.5
Total	**520.8**
Amortized over 30 years	**17.4**
Notes: Calculation totals use unrounded numbers from CalEEMod output. $MTCO_2e$ = metric tons of carbon dioxide equivalents	

Operation

Operational or long-term emissions occur over the life of the Project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, and waste generation, and area sources such as consumer products and landscaping activities.

Business-As-Usual Operational Emissions. Operational emissions under the BAU scenario were modeled using CalEEMod 2016.3.2 and EMFAC 2017. Modeling assumptions for the year 2005 were used to represent 2021 and 2030 BAU conditions (without the benefit of regulations adopted to reduce GHG emissions). The SJVAPCD guidance recommends using emissions in 2002–2004 in the baseline scenario to represent conditions—as if regulations had not been adopted—to allow the effect of projected growth on achieving reduction targets to be clearly defined. The vehicle fleet mix was revised to reflect the Project's trip generation and vehicle types. The year 2021 was chosen because it is the first year of Project operations and is close to the AB 32 target year. The year 2030 was also modeled because it is the SB 32 target year. Full assumptions and CalEEMod model outputs are provided in Appendix A.

2021 and 2030 Operational Emissions. Operational emissions for the year 2021 and 2030 were modeled using CalEEMod and off-model calculations using EPA, ARB, and SJVAPCD emission

[32] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 95-96.

factors. CalEEMod assumes compliance with some, but not all, applicable rules and regulations regarding energy efficiency, vehicle fuel efficiency, renewable energy usage, and other GHG reduction policies, as described in the CalEEMod User's Guide.[33] The analysis uses PG&E energy intensity rates that reflect the utility's renewable portfolio.

The reductions obtained from each regulation and the source of the reduction amount used in the analysis are described below.

- The following regulations are incorporated into the CalEEMod emission factors:
- Pavley I motor vehicle emission standards
- Pavley II (LEV III) Advanced Clean Cars Program
- 2005, 2008, 2013, and 2016 Title 24 Energy Efficiency Standards

The following regulations have not been incorporated into the CalEEMod emission factors and require alternative methods to account for emission reductions provided by the regulations:

- Low Carbon Fuel Standard (LCFS)
- Renewable Portfolio Standard (RPS)

Pavley II/LEV III standards have been incorporated in the latest version of CalEEMod. ARB estimates a 3 percent reduction in 2020 and a 19 percent reduction from the vehicle categories subject to the regulation by 2030.[34]

The ARB GHG Regulation for Medium and Heavy-Duty Engines and Vehicles applies to trucks that will be accessing the Project site. The benefits of the regulation were incorporated into CalEEMod 2016.3.2. The ARB estimates that this regulation will reduce GHG emissions from the affected vehicles by 7.2 percent.

The Low Carbon Fuel Standard (LCFS) is estimated to achieve a 10 percent reduction in emissions by 2020 and a 20 percent reduction by 2030. CalEEMod does not include credit for the LCFS, so the reduction is calculated off-model.

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[33] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 96.

[34] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 96-97.

RPS is not included in CalEEMod, so the benefits of compliance with the RPS is accounted for using the individual energy intensity of the electric utility.

Reductions in emissions from solid waste are based on the County achieving the CalRecycle 75 Percent Initiative by 2020 compared with a 50 percent baseline for 2005. Reductions are taken using the CalEEMod mitigation component.

Regulations applicable to Project sources and the percent reduction anticipated from each source are shown in Table 3.8-4. The percentage reductions are only applied to the specific sources subject to the regulations. For example, the Pavley Low Emission Vehicle Standards apply only to light-duty cars and trucks.

Table 3.8-4
Reductions from Greenhouse Gas Regulations[35]

Regulation	Project Applicability	Reduction Source	Percent Reduction in 2020 and 2030
Pavley Low Emission Vehicle Standards	Light-duty cars and trucks accessing the site are subject to the regulation	CalEEMod defaults (Pavley I)	25.1[1]
		CalEEMod defaults.	3% 2020 19.5% 2030[2]
ARB Truck and Bus Regulation	Heavy Duty Trucks serving the project are subject to the regulation	Adjusted GHG Emission Factors for HD Trucks in CalEEMod	7.16%[3]
Low Carbon Fuel Standard (LCFS)	Vehicles accessing the site will use fuel subject to the LCFS	Off model adjustment of results	10% 2020 18% 2030[1]
Green Building Code Standards	The project will include water conservation features required by the standard.	CalEEMod mitigation component	20%[6]
Water Efficient Land Use Ordinance	The project landscaping will comply with the regulation.	CalEEMod mitigation component	20%[7]

[35] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 97-98.

Regulation	Project Applicability	Reduction Source	Percent Reduction in 2020 and 2030
Renewable Portfolio Standard (RPS)	Electricity purchased for use at the project site is subject to the 33 percent RPS mandate.	CalEEMod adjusted energy intensity factors with PG&E emission factors that show the company will exceed the 33 percent mandate.	54.5%[8]
Solid waste	The solid waste service provider will need to provide programs to increase diversion and recycling to meet the 75 percent mandate.	CalEEMod mitigation component	25%[9]

Notes:

Regulations are described in Section 2.3 Regulatory Environment. The source of the percentage reductions from each measure are from the following sources:

[1] Pavley 1 + Low Carbon Fuel Standard Postprocessor Version 1.0 User's Guide (ARB 2010 and ARB 2018b)

[2] ARB Staff Report for LEV III Amendments (ARB 2013e)

[3] ARB Truck and Bus Regulation (ARB 2013f)

[5] California Energy Commission Adoption Hearing Presentation: 2016 Buildings Energy Efficiency Standards (CEC 2015)

[6] 2013 California Green Building Standards Code Section 5.303.2

[7] California Water Plan Update 2013 (CDWR 2013)

[8] Based on CalEEMod default PG&E rate for 2005 and PG&E projected emission factor for 2020

[9] CalRecycle 75 Percent Initiative: Defining the Future (2016).

Full assumptions and model outputs are provided in Appendix A and results of this analysis for the 2021 modeling year are presented in Table 3.8-5.

Table 3.8-5
Project Operational Greenhouse Gases (2021)[36]

Source	Emissions ($MTCO_2e$ per year)		
	Business as Usual	**2021 (with Regulation)**	**Percent Reduction**
Area	0.01	0.01	4.6%
Energy	1,065.19	592.02	44.4%
Mobile Employee	501.67	364.21	27.4%
Mobile Maintenance and Delivery Trucks	48.34	40.83	15.5%
Mobile Truck	1,323.12	1,078.62	18.5%
Off Road Forklift and Yard Trucks	132.15	117.9	10.8%
Waste	110.79	83.10	25.0%
Water	74.87	34.67	53.7
Refrigerants	115.00	58.00	49.6%
Amortized Construction Emissions	17.36	17.36	0.0%
Total	**3,388.5**	**2,386.71**	**29.6%**
Reduction from BAU		**1,001.79**	—
Percent Reduction		**29.6%**	—
Significance Threshold		21.7%	—
Are emissions significant?		No	
Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalents. The project achieves the 21.7 percent required to show consistency with AB 32 targets.			

[36] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 98-99.
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As presented in Table 3.8-5, the Project would achieve a reduction of 29.6 percent from BAU by the year 2021 with regulations incorporated. This is 7.9 percent above the 21.7 percent average reduction from all sources of GHG emissions now required to achieve AB 32 targets. The ARB originally identified a reduction of 29 percent from BAU as needed to achieve AB 32 targets and used to develop the SJVAPCD BAU threshold. The 2008 recession and slower growth in the years since 2008 have reduced the growth forecasted for 2020, and the amount needed to be reduced to achieve 1990 levels as required by AB 32.

Table 3.8-6 shows progress toward achieving 2030 targets with implementation of adopted regulations and on-site reductions from efficiency measures. The results show that the project would achieve a 39.9 percent reduction from BAU by 2030. This is 18.2 percent beyond the average reduction required by the State from all sources to achieve the AB 32 target.

Table 3.8-6
Project Operational Greenhouse Gases (2030)[37]

Source	Emissions ($MTCO_2e$ per year)		
	Business as Usual	**2030 (with Regulation)**	**Percent Reduction**
Area	0.01	0.01	4.7%
Energy	1,065.19	592.02	44.4%
Mobile Employee	501.67	236.96	52.8%
Mobile Maintenance and Delivery Trucks	48.34	33.88	29.9%
Mobile Truck	1,323.12	883.14	33.3%
Off Road Forklift and Yard Trucks	132.15	103.28	21.8%
Waste	110.79	83.10	25.0%
Water	74.87	28.79	61.5%
Refrigerants	115.00	58.00	49.6%
Amortized Construction Emissions	17.36	17.36	0.0%
Total	**3,388.5**	**2,036.53**	**39.9%**
Reduction from BAU		**1,351.96**	—
Percent Reduction		**39.9**	—
Significance Threshold		21.7%	—
Are emissions significant?		No	
Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalents. The project achieves the 21.7 percent required to show consistency with AB 32 targets.			

[37] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 99-100.
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The analysis presented above does not include new strategies included in the 2017 Scoping Plan Update. The update was adopted in December 2017. The update provides alternatives in terms of their likelihood of implementation and ranges of reduction from the strategies. Measures already authorized by legislation are highly likely to be implemented, while measures requiring new legislation are less likely to go forward. The State is highly likely to incorporate zero net energy buildings in future updates to Title 24. A new round of motor vehicle fuel efficiency standards beyond 2025 when LEV III standards are at their maximum reduction level is highly likely. Changing heavy-duty trucks and off-road equipment to alternative fuels face greater technological hurdles and are less likely to provide dramatic reductions by 2030; however, ARB adopted the Advanced Truck Regulation on June 25, 2020. The new regulation applies to vehicles sold between 2024 and 2035 and is expected to provide substantial reductions toward California's GHG reduction goals.

The 2030 emission limit is 260 $MMTCO_2e$. The ARB estimates that the 2030 BAU (reference) Inventory will be 392 $MMTCO_2e$—a reduction of 132 $MMCO_2e$, including existing policies and programs but not including known commitments that are already underway. The 2017 Scoping Plan Update includes the estimated GHG emissions by sector compared with 1990 levels that is presented in Table 3.8-7. The proposed plan would achieve the bulk of the reductions from Electric Power, Industrial fuel combustion, and Transportation. Cap-and-Trade would provide between 10 and 20 percent of the required reductions depending on the amounts achieved by the other reduction measures.

Table 3.8-7
2017 Scoping Plan Update Estimated Change in GHG Emissions by Sector[38]

Scoping Plan Sector	Emissions ($MMTCO_2e$ per year)		
	1990	2030 Proposed Plan Ranges	Percent Change form 1990
Agriculture	26	24–25	-4 to -8
Residential and Commercial	44	38–40	-9 to -14
Electric Power	108	42–62	-43 to -61
High GWP	3	8–11	167 to 267
Industrial	98	77–87	-11 to -21
Recycling and Waste	7	8–9	14 to 29
Transportation (including TCU)	152	103–111	-27 to -32
Net Sink	-7	TBD	TBD
Subtotal	431	300–345	-20 to -30
Cap-and-Trade Program	N/A	40–85	N/A
Total	431	260	-40

Although 2017 Scoping Plan Update focuses on state agency actions necessary to achieve the 2030 GHG limit, the ARB considers local governments essential partners in achieving California's goals to reduce GHG emissions. The 2030 target will require an increase in the rate of emission reductions compared with what was needed to achieve the 2020 limit, and this will require action and collaboration at all levels, including local government action to complement and support State-level actions. For individual projects, the 2017 Scoping Plan Update suggests that all new land use development implement all feasible measures to reduce GHG emissions. The Scoping Plan does not define all feasible measures or attribute an amount of reductions required from new development beyond compliance with regulations. When requiring mitigation of a project's

[38] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 100-101.
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fair share of a cumulative impact, the Lead Agency must show the nexus between the project contribution and its fair share of mitigation to reduce the impact to less than cumulatively considerable. A threshold based on local support and collaboration with state actions as described in the 2017 Scoping Plan Update does not lend itself to a quantitative determination of fair share. Requiring developers and future business operators to fully mitigate emissions without accounting for compliance with regulations would result in double mitigation, first by the developer and then by the business operator purchasing electricity, fuel, and vehicles compliant with regulations in effect at the time of purchase and beyond that would violate constitutional nexus requirements.

In conclusion, the Project would achieve reductions 7.9 percent beyond the ARB 2020 21.7 percent target reduction from BAU requirements from adopted regulations. No new threshold has been adopted by the County or the SJVAPCD for the SB 32 2030 target. However, the Project would achieve reductions of 39.9 percent from BAU by 2030 through compliance with existing regulations. Project stationary sources would meet the latest BPS identified for by the SJVAPCD and will be required to perform mandatory emission reporting if reporting thresholds are exceeded. Based on this progress and the strong likelihood that the measures included in the 2017 Scoping Plan Update will be implemented, it is reasonable to conclude that the Project is consistent with the 2017 Scoping Plan and will contribute a reasonable fair-share contribution to achieving the 2030 target. Fair share may very well be achieved through compliance with increasingly stringent state regulations that apply to new development, such as Title 24 and CALGreen; regulations on energy production, fuels, and motor vehicles that apply to both new and existing development; and voluntary actions to improve energy efficiency in existing development. In addition, compliance with the VMT targets adopted to comply with SB 375 and implemented through the RTP/SCS may be considered to adequately address GHG emissions from passenger cars and light-duty trucks. As shown in Table 3.8-7, the state strategy relies on the Cap-and-Trade Program to make up any shortfalls that may occur from the other regulatory strategies. The costs of Cap-and-Trade emission reductions will ultimately be passed on to consumers of fuels, electricity, and products produced by regulated industries, such as future businesses and residents and other purchasers of products and services. Therefore, the impact in terms of Considerations #1 and #2 would be ***less than significant***.

Mitigation Measures:

None Required.

Impact 3.8-2: *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less Than Significant. The following analysis assesses the Project's compliance with Consideration #3 regarding consistency with adopted plans to reduce GHG emissions. Fresno County has not adopted a GHG reduction plan. In addition, the County has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to the Project. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the Project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted 2008 and 2017 Scoping Plans. This would be achieved with an assessment of the Project's compliance with Scoping Plan measures.

AB 32 Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (CO_2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent (currently 21.7 percent) from BAU emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita basis, that means reducing annual emissions of 14 tons of CO_2 for every man, woman, and child in California down to about 10 tons per person by 2020. As stated earlier, the ARB has updated its emission inventory forecasts and now estimates a reduction of 21.7 percent is required from BAU in 2020 to achieve AB 32 targets. In addition, ARB announced on July 18, 2018 that 2016 greenhouse gas inventory for California fell below 1990 levels for the first time since emissions peaked in 2004.[39]

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in Table 3.8-8, the Project is consistent with most of the strategies, while others are not applicable to the Project.

[39] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 102-103.

Table 3.8-8
Project Consistency with Scoping Plan[40]

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle Greenhouse Gas Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles 2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the project would be required to comply with the Pavley emissions standards.

[40] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 103.

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Low Carbon Fuel Standard.	2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-Related Greenhouse Gas Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	**Consistent**. The project will provide a small increase in employment in the region that is consistent with the growth projections in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
	Goods Movement	Goods Movement Action Plan January 2007.	**Not applicable**. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicles	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	**Consistent**. This measure applies to medium and heavy-duty vehicles that operate in the State. The project would not conflict with implementation of this measure. Medium and heavy-duty vehicles associated with construction and operation of the project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	**Not applicable**. This is a statewide measure that cannot be implemented by a project applicant or lead agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020) SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	**Consistent**. PG&E obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owners of residences within the project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.
	Million Solar Roofs Program	Tax incentive program	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The program does not target agricultural facilities; however, the project could install solar panels voluntarily in the future.
Water	Water	Title 24 Part 11 California Green Building Code Standards SBX 7-7—The Water Conservation Act of 2009 Model Water Efficient Landscape Ordinance [MWELO]	**Not applicable.** The project is not subject to the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use for residential and commercial development, but not agricultural industrial uses. The project will install limited landscaping that will be consistent with provisions of the subject to a Model Water Efficient Landscape Ordinance (MWELO).
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use and solar ready roofs.
Industry	Industrial Emissions	2010 ARB Mandatory Reporting Regulation	**Consistent.** The project will be required to participate in the Mandatory Reporting Program.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The project would not conflict with implementation of these measures. The project is

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		AB 341 Statewide 75 Percent Diversion Goal	would participate in any recycling program operated by its Solid waste hauler and would use waste products of the pistachio processing for beneficial uses.
Forests	Sustainable Forests	Cap-and-Trade Offset Projects	**Not applicable.** The project site is in an area designated for agricultural uses. No forested lands exist on-site.
High Global Warming Potential	High Global Warming Potential Gases	ARB Refrigerant Management Program CCR 95380	**Consistent**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The project includes a small cold storage building that will be subject to the refrigerant management regulations adopted by ARB. Other buildings are cooled with evaporative cooling and fans.
Agriculture	Agriculture	Cap-and-Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable.** The project is a food processing operation that is not subject to Cap-and-Trade. The only Agricultural Scoping Plan measure is one that encourages dairies to install anaerobic digesters.

Consistency with California's Post 2020 Targets

The State's executive branch adopted several Executive Orders related to GHG emissions. Executive Orders S-3-05 and B-30-15 are two examples. Executive Order S-3-05 sets goals to reduce emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. The goal of Executive Order S-3-05 to reduce GHG emissions to 1990 levels by 2020 was codified by AB 32. The project, as analyzed above, is consistent with AB 32. Therefore, the Project does not conflict with this component of Executive Order S-3-05. Executive Order B-30-15 establishes an interim goal to reduce GHG emissions to 40 percent below 1990 levels by 2030.

The 2030 goal of Executive Order B-30-15 was codified under SB 32 and is now addressed by the 2017 Scoping Plan Update. The 2017 Scoping Plan update provides a strategy that is capable of reaching the SB 32 target if the measures included in the plan are implemented and achieve reductions within the ranges expected. Under the Scoping Plan Update, local government plays a supporting role through its land use authority and control over local transportation infrastructure. The Plan Update includes reductions from implementation of SB 375 that applies to VMT from passenger vehicles. Fresno County targets for SB 375 are a 5 percent reduction by 2020 and a 10 percent reduction by 2035. SB 375 is implemented with the Fresno COG RTP/SCS. The RTP/SCS envisions an increase in development density that would encourage fewer and shorter trips and more trips by transit, walking, and bicycling.

Now that the 2017 Scoping Plan has been adopted, new methodologies and threshold approaches are required to determine the fair-share contributions County development projects would need to make to achieve the 2030 target. In the meantime, however, the discussion under "Consistency with SB 32" below addresses the consistency of the proposed project with SB 32, which provides the statutory underpinning of the 2017 Scoping Plan. The SB 32 target requires GHG emissions to be reduced by 40 percent from 1990 levels. No consensus has been reached around the State on a new quantitative target for new development based on consistency with the SB 32 target.

The Executive Order S-3-05 2050 target has not been codified by legislation. Studies have shown that, in order to meet the 2050 target, aggressive pursuit of technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. Because of the technological shifts required and the unknown parameters of the regulatory framework in

2050, quantitatively analyzing the project's impacts further relative to the 2050 goal is speculative for purposes of CEQA.[41]

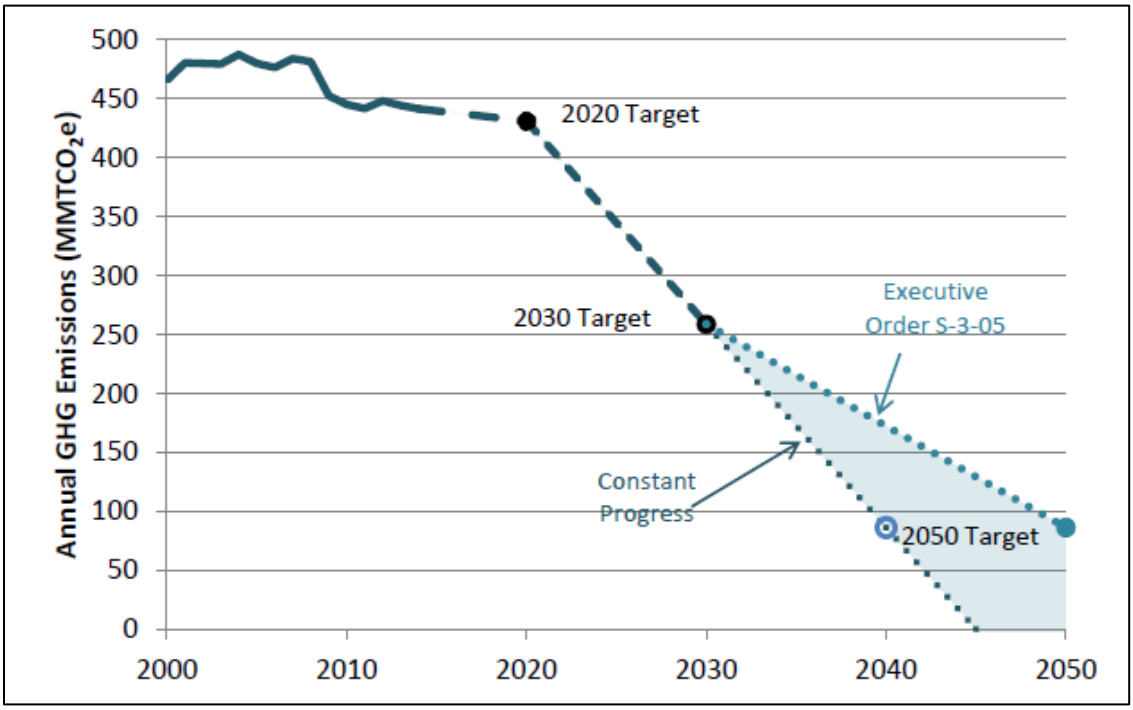
The 2008 Scoping Plan recognized that AB 32 established an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate." In addition, ARB's First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by ARB would serve to reduce the proposed project's post-2020 emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the proposed Project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the proposed Project's emissions level.
- **Water Sector:** The proposed Project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the proposed Project's emissions level.

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets. The trajectory required to achieve the post-2020 targets is shown in Figure 3.8-4.

[41] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 108.

Figure 3.8-4
California's Path to Achieving the 2050 Target[42]



In his January 2015 inaugural address, Governor Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;
- Cutting the petroleum use in cars and trucks in half; and
- Doubling the efficiency of existing buildings and making heating fuels cleaner.

<u>Consistency with SB 32</u>

The 2017 Scoping Plan includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

[42] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, page 110.

- SB 350
    - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 (Now 60 percent per SB 100).
    - Doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard (LCFS)
    - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020) (Now 20 percent in 2030).
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
    - Maintaining existing GHG standards for light- and heavy-duty vehicles.
    - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
    - Increase ZEV buses, delivery and other trucks.
- Sustainable Freight Action Plan
    - Improve freight system efficiency.
    - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
    - Deploy over 100,000 zero-emission trucks and equipment by 2030.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy
    - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
    - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
- SB 375 Sustainable Communities Strategies
    - Increased stringency of 2035 targets.
- Post-2020 Cap-and-Trade Program
    - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.

- ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

- By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Table 3.8-9 provides an analysis of the project's consistency with the 2017 Scoping Plan Update

Table 3.8-9
Consistency with SB 32 2017 Scoping Plan Update[43]

Scoping Plan Measure	Project Consistency
SB 350 50% Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent**: The project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels	**Not Applicable.** This measure applies to existing buildings.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent.** Vehicles accessing the project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent.** Future employees can be expected to purchase increasing numbers of more fuel-efficient and zero emission cars and trucks each year.

[43] Air Quality and Greenhouse Gas Analysis Report for the Kamm Avenue Pistachio Processing Plant. Prepared by Mitchell Air Quality Consulting. See Appendix A, pages 111-112.

Scoping Plan Measure	Project Consistency
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not Applicable.** The measure applies to owners and operators of trucks and freight operations.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Not Applicable.** The project does not include sources that produce significant quantities of methane or black carbon. Diesel trucks accessing the site will achieve significant reductions in $PM_{2.5}$ with adopted regulations that will reduce this source of black carbon.
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Not Applicable.** The project is a food processing operation in a rural area. The project is expected to have high rates of carpooling because of the distance to the nearest urban areas.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased costs of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.
	Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and

Scoping Plan Measure	Project Consistency
	from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not Applicable.** The project site is vacant agricultural land that will be developed with an industrial use and would not be considered natural or working lands suitable for sequestration.

Regarding goals for 2050 under Executive Order S-3-05, it is not possible at this time to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that Project operation would comply with applicable measures enacted by state lawmakers to achieve an 80 percent reduction below 1990 levels by 2050. In its 2008 Scoping Plan, ARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." The 2017 Scoping Plan provides an intermediate target that is intended to achieve reasonable progress toward the 2050 target.

Accordingly, taking into account the proposed Project's emissions, consistency with Scoping Plan measures, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the Project would further the State's goals of reducing GHG emissions to 1990 levels by 2020, a 40 percent reduction from 1990 levels by 2030, and an 80 percent reduction below 1990 levels by 2050, and would not obstruct their attainment. Impacts are ***less than significant.***

Mitigation Measures:

None Required.

Cumulative Impacts

Less Than Cumulatively Considerable. The State of California, through AB 32, has acknowledged that GHG emissions are a statewide impact. Emissions generated by the proposed

Project combined with past, present, and reasonably probable future projects could contribute to this impact. The CEQA Guidelines emphasize that effects of GHG emissions are cumulative in nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The California Governor's Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.

As discussed above, the proposed Project would not generate significant GHG emissions and would be consistent with GHG reduction plans. Therefore, the proposed Project's incremental contribution would be ***less than cumulatively considerable.***

3.9 Hazards and Hazardous Materials

This section of the DEIR identifies potential impacts of the proposed Project pertaining to hazards and hazardous materials, proximity to airports/schools, and assessment of wildfire risk. No NOP comment letters were received pertaining to this topic.

Hazards include man--made or natural materials or man--made or natural conditions that may pose a threat to human health, life, property, or the environment. Hazardous materials and waste present health hazards for humans and the environment. These health hazards can result during the manufacture, transportation, use, or disposal of such materials if not handled properly. Hazards to humans can also existing from natural or human induce wildfire and air traffic accidents.

Environmental Setting

Hazardous Materials

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported, or disposed of.

Hazardous materials include a variety of substances such as lubricants, herbicides and pesticides, solvents, gasoline, household cleaning products, refrigerants and radioactive substances. Some are common to industrial and commercial process, while others are commonly used in households. A hazardous waste is simply the spent or used hazardous material that requires disposal. Improper transport, storage, handling, use and disposal of hazardous wastes can have significant impacts on the environment and human health.

Hazardous Sites

The Cortese List is a planning document used by the State, local agencies, and land owners to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. The California Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) are responsible for a portion of the information contained in

the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

DTSC maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. This site cleanup information includes: Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites, Corrective Action Sites, Tiered Permit Sites, and Evaluation / Investigation Sites. The hazardous waste facilities include: Permitted–Operating, Post---Closure Permitted, and Historical Non---Operating. According to the DTSC, there no cleanup sites within a 12-mile radius of the proposed Project site.[1]

GeoTracker is the SWRCB's data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites. There are three locations within seven miles of the proposed Project site that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST).[2] All three locations have undergone LUST cleanup and the State has closed each case.

Wildfire Hazards

In California, responsibility for wildfire prevention and suppression is shared by federal, state and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA). While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones. CAL FIRE maps three SRA zones: 1) Moderate Fire Hazard Severity

[1] California Department of Toxic Substances Control. Envirostor Database. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=three+rocks+ca. Accessed October 2020.
[2] California Water Resource Control Board. GeoTracker Database. https://geotracker.waterboards.ca.gov/map/. Accessed October 2020.

Zones; 2) High Fire Hazard Severity Zones; and 3) Very High Fire Hazard Severity Zones. Only the Very High Fire Hazard Severity Zones are mapped for the LRA. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas. According to LRA mapping, no land within Fresno County is designated as a Very High Fire Hazard Severity Zone.[3] Additionally, according to CAL FIRE, the nearest SRA mapped land is on the east side of Interstate 5, approximately 3.75 miles to the southwest of the site at its nearest point.[4]

Airports

The nearest public airport is the William Robert Johnson Municipal Airport in Mendota, over ten miles north of the Project site while the nearest private airport is the San Joaquin Airport, over 12 miles to the northeast.

Schools

Cantua Elementary School is part of the Golden Plains Unified School District and has an enrollment of 161 k-8 students.[5] It is approximately 4.5 miles southeast of the Project site.

Fresno County Multi-Hazard Mitigation Plan

The purpose of the Fresno County Multi-Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from hazards. Fresno County and the other participating jurisdictions developed this multi-hazard mitigation plan to make the County and its residents less vulnerable to future hazard events. This plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that Fresno County would be eligible for the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance Grants, including Pre-Disaster Mitigation and Hazard Mitigation Grant programs as well as lower flood insurance premiums (in jurisdictions that participate in the National Flood Insurance Program's Community Rating System). The plan was originally developed in 2007-2008 and FEMA approved in 2009. The plan was comprehensively updated in 2017-2018. The County followed a

[3] California State Geoportal. California Fire Hazard Severity Zone Viewer. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414. Accessed October 2020.
[4] California Department of Forestry and Fire Protection. Fire Hazard Severity Zones Maps. Fresno County. https://osfm.fire.ca.gov/media/6449/fhszs_map10.jpg. Accessed October 2020.
[5] California Department of Education. School Profie: Cantua Elementary. https://www.cde.ca.gov/sdprofile/details.aspx?cds=10752346005805. Accessed October 2020.

planning process in alignment with FEMA guidance during its original development and update, which began with the formation of a hazard mitigation planning committee (HMPC) comprised of key county, city, and district representatives and other stakeholders. The HMPC conducted a risk assessment that identified and profiled hazards that pose a risk to Fresno County, assessed the County's vulnerability to these hazards, and examined the capabilities in place to mitigate them. The County is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. Floods, wildfires, severe weather, drought, and agricultural hazards are among the hazards that can have a significant impact on the County. Based on the risk assessment, the HMPC identified goals and objectives for reducing the County's vulnerability to hazards. To meet identified goals and objectives, the plan recommends a number of mitigation actions that include actions specific to each participating jurisdiction. This plan has been formally adopted by the County and the participating jurisdictions and will be updated every five years at a minimum.

Standardized Emergency Management System (SEMS)

The standardized emergency management system (SEMS) is a structure for coordination between the government and local emergency response organizations. It provides and facilitates the flow of emergency information and resources within and between the organizational levels of field response, local government, operational areas, regions and state management. SEMS facilitates priority setting, integrated coordination, effective flow of resources and information between all stakeholders. SEMS incorporates the use of the Incidental Command System (ICS), Master Mutual Aid Agreement (MMAA), Operational Area (OA) concept and multi-agency and interagency coordination. State agencies and local government units are to use SEMS in order to become eligible for reimbursement costs led by the state's disaster assistance program.

Regulatory Setting

Federal Regulations

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (HMTA) as amended, is the major federal transportation-related statute affecting the transportation of hazardous material in commerce. The objective of the HMTA according to the policy stated by Congress is "... to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against risks to life and property which are inherent in the transportation of hazardous materials in commerce." The HMTA empowers the Secretary of Transportation to

designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Regulations apply to "… any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."[6]

Superfund

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as "Superfund", was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.

Superfund Amendments and Reauthorization Act SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to $8.5 billion, expanded EPA's response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List.

[6] United States Department of Labor. Occupational Safety and Health Administration. Transporting Hazardous Materials. https://www.osha.gov/SLTC/trucking_industry/transportinghazardousmaterials.html. Accessed October 2020.

Federal Insecticide, Fungicide and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale, and use. All pesticides distributed or sold in the United States must be registered (licensed) by the federal Environmental Protection Agency (EPA). Before EPA may register a pesticide under FIFRA, the applicant must show, among other things, that using the pesticide according to specifications "will not generally cause unreasonable adverse effects on the environment." 7 U.S.C. Section 136 et seq.

Federal Emergency Management Act (FEMA)

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) provides the EPA with the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focus on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

<u>State of California Regulations</u>

California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC)

Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the RCRA program in California, and develops regulations, policies, guidance and technical assistance/

training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state's Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards.

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 ET SEQ (HSAA)

This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the state's 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA's ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup.

California Code of Regulations

Title 3 of the CCR pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application
- Damage non---target crops or animals or any other public or private property
- Contaminate public or private property or create health hazards on said property

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation and maintenance of the State's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

California Fire Code

The California Fire Code (CFC) is Part 9 of Title 24, California Code of Regulations, also referred to as the California Building Standards Code. The CFC incorporates the 2009 International Fire Code of the International Code Council with necessary California amendments. The purpose of the CFC is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.

California Health and Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Division 12 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Division 20 of the Health and Safety Code establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 of the Health and Safety Code establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

California Health and Safety Code and UBC Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq*. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the UBC and mandate the abatement of fire hazards. The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Vehicle Code §31600 (Transportation of Explosives)

Establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

Cal/EPA Cortese List

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). The Cortese List identifies the following:

- Hazardous Waste and Substance Sites
- Cease and desist order Sites
- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- WDR Sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

Local Regulations

Fresno County General Plan

The following lists goals and policies from the Health and Safety Element of the Fresno County 2000 General Plan pertaining to hazards and hazardous materials that are applicable to the proposed project.

Policy HS-B.1: The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.

Policy HS-B.5: The County shall require development to have adequate access for fire and emergency vehicles and equipment.

Policy HS-B.8: The County shall refer development proposals in the unincorporated County to the appropriate local fire agencies for review of compliance with fire safety standards. If dual responsibility exists, both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall apply.

Goal HS-F: To minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

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.

Fresno County Environmental Health Department

The Fresno County Environmental Health Department implements the Hazardous Waste Generator Program and the Hazardous Waste Treatment/Tiered Permit Program throughout Fresno County. The purpose of these programs is to ensure that all hazardous waste generated in Fresno County businesses are properly handled, recycled, treated, stored and disposed. Environmental Health staff inspects facilities that generate hazardous waste, investigates reports of illegal hazardous waste disposal, and responds to emergency spills of hazardous chemicals. Environmental Health staff also participates in public education programs to inform industries and residents about the laws and regulations relating to the safe disposal of hazardous waste.

Facilities that store, use or handle hazardous materials above reportable amounts are required to prepare and file a Hazardous Materials Business Plan for the safe storage and use of chemicals. In the event of an emergency, firefighters, health officials, planners, public safety officers, health care providers and others rely on the Business Plan. Implementation of the Business Plan should prevent or reduce damage to the health and safety of people and the environment when a hazardous material is released.

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air District (SJVAPCD) is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies. SJVAPCD's ten core values include: protection of public health; active and effective air pollution control efforts with minimal disruption to the Valley's economic prosperity; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the Valley; continuous improvement; effective and efficient use of public funds; and respect for the opinions and interests of all Valley residents.[7] To achieve these core values the SJVAPCD has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the proposed Project are listed and described further below.

The SJVAPCD is responsible for controlling emissions primarily from stationary sources. The SJVAPCD, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the SJVAB. The SJVAPCD also regulates asbestos demolition and other hazardous materials handling.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. In Fresno County, the County Health Services Department Hazardous Materials Division is responsible for the County's Certified Unified Program Agency (CUPA) programs. Each designated CUPA is responsible for the implementation of six statewide programs within its jurisdiction. These programs include:

- Underground storage of hazardous substances (USTs)

[7] San Joaquin Valley Air Pollution Control District. About the District. https://www.valleyair.org/General_info/aboutdist.htm#Mission. Accessed October 2020.

- Hazardous Materials Business Plan (HMP) requirements
- Hazardous Waste Generator requirements
- California Accidental Release Prevention (Cal---ARP) program
- Uniform Fire Code hazardous materials management plan
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan only)

Implementation of these programs involves:

- Permitting and inspection of regulated facilities
- Providing educational guidance and notice of changing requirements stipulated in State or Federal laws and regulations
- Investigations of complaints regarding spills or unauthorized releases
- Administrative enforcement actions levied against facilities that have violated applicable laws and regulations

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Create a significant hazard through transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- Emit hazardous emissions within one-quarter mile of an existing or proposed school
- Located on a list of hazardous materials site
- Located within an airport land use plan
- Interfere with an adopted emergency response plan or emergency evacuation plan
- Wildland Fire Risk

Impacts and Mitigation Measures

Impact 3.9-1: *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant Impact. Project construction and operation would require the use, transport and dispersal of hazardous materials such as fuels, lubricants, oils, cleaning solvents and solutions. There is a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices. The storage and use of fuels and other hazardous materials are controlled and permitted by Fresno County which conducts Uniform Fire Code inspections of these facilities, regulates these facilities, and otherwise ensures that risks associated with the use of hazardous materials in the community area are minimized.

The proposed Project does not involve uses or operations that would allow for the manufacture of hazardous materials; however, hazardous materials will be present via shipping to and from the Project area in route to their destination. The transport of these hazardous materials on area roadways are regulated by the California Highway Patrol and Caltrans.

Any new hazardous materials transportation, use, and disposal would be subject to state and federal hazardous materials laws and regulations. The transport of hazardous materials is regulated by the U.S. Department of Transportation (DOT). Hazardous materials use, storage, and disposal would be subject to hazardous materials programs administered by the County Health Services Department Hazardous Materials Division.

As previously discussed under Impact 3.10-1, a SWPPP would be submitted to the Central Valley RWQCB and the County for review and approval. Implementation of the SWPPP would ensure that BMPs are implemented to reduce or eliminate pollutants in stormwater discharges from the project site during construction, thereby reducing any potential impacts associated with the accidental upset or release of hazardous materials to a less than significant level.

The Project will be required to comply with established local, State and Federal regulations that govern the transport, use, storage, and disposal of hazardous materials. Adherence to existing regulations would result in a ***less than significant impact***.

Mitigation Measures

None required.

Impact 3.9-2: *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. The proposed Project site is not located within ¼ mile of an existing school or proposed school. In addition, there are no lands within ¼ mile that are zoned for a school and therefore it is unlikely that a school will be developed in the Project area.

Mitigation Measures

None required.

Impact 3.9-3: *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. There are no sites within a ten-mile radius of the Project area that are included as cleanup sites on the DTSC EnviroStor database. There are three locations within seven miles that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST), all of which have undergone LUST cleanup and the State has closed the case. Although there are no known underground petroleum storage tanks within the 315-acre Project site, should this type of tank be discovered during construction activities, the Project Applicant / property owner will be required to apply for and secure an Underground Storage Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division. There is ***no impact.***

Mitigation Measures

None are required.

Impact 3.9-4: *For a project located within an airport land use pan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. The nearest municipal airport is in the City of Mendota, over ten miles to the north, and the nearest private airport is the San Joaquin Airport, over 12 miles to the northeast. Due to the distance to the airport, there would be ***no impacts*** due to safety hazards resulting from nearby airports.

Mitigation Measures

None are required.

Impact 3.9-5: *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. The construction and operation of the proposed Project would interfere with an adopted emergency response plan or emergency evacuation plan if the proposed project resulted in the complete or partial closure of roadways, interfered with identified evacuation routes, restricted access for emergency response vehicles, or restricted access to critical facilities such as hospitals or fire stations. The proposed Project is in a rural area with multiple access roads allowing for adequate egress and ingress to the site in the event of an emergency. The proposed Project would not require the closure of public roads which would inhibit access by emergency vehicles. Heavy construction-related vehicles could interfere with emergency response to the site or emergency evacuation procedures in the event of an emergency (e.g., by slowing vehicles travelling behind construction trucks); however, given that there are limited businesses and residences and no emergency response stations in the immediate Project vicinity, it is not considered likely that project-related traffic would result in inadequate emergency access. Impacts are ***less than significant.***

Mitigation Measures

None are required.

Impact 3.9-6: *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Less Than Significant Impact. As described in the environmental setting of this Chapter, and further discussed in Section 3.20, the Project is located such that it has minimal risk of wildland fires. No wildlands exist in the Project site or in the immediate vicinity of the Project site. As such, any impacts resulting from wildland fires would be ***less than significant***.

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. 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. Project construction may involve the transportation, use, and/or disposal of hazardous materials, which may involve the use of equipment that contains hazardous materials (e.g., solvents and fuels, diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated.

As discussed previously, the proposed Project would have less than significant hazards and hazardous materials impacts during construction and operation. Considering the protection granted by local, State and federal agencies and their requirements for the use of hazardous materials in the region, as discussed above, the overall cumulative impact would be less than significant. As such, the proposed project's incremental contribution to cumulative hazards and human health impacts would be ***less than cumulatively considerable***.

3.10 Hydrology and Water Quality

This section of the DEIR identifies potential impacts of the proposed Project pertaining to hydrology, water supply and water quality. To assist in evaluation of this environmental impact, a Hydrology and Water Quality Analysis (Appendix F) and Water Supply Analysis (Appendix G) were prepared. No NOP comment letters were received pertaining to this topic.

Environmental Setting

The Project site is designated as Exclusive Agriculture in the Fresno County General Plan and zoned AE-20, Exclusive Agriculture, 20-acre minimum required. The parcels have not been used for commercial agricultural purposes since before they were acquired in 2011. Historical records indicate that that the northern parcel, APN 038-300-17S, has not been used for agriculture since at least 2009. The southern parcel, APN 038-300-30S, has not been used for agriculture since 2006. The westerly parcel, APN 038-300-14S, portions of which would be used for pistachio shell and other non-hulling processing materials disposal, has not been used for agriculture since 2006.

Surface water for the Project area is provided by Westlands Water District WWD which contracts with the federal Central Valley Project (CVP) for most of its water supply. The site is currently fallow and uses no CVP water. The CVP is a water storage and distribution system operated by the U.S. Bureau of Reclamation (USBR). WWD has annual contracts for approximately 1,500,000 acre-feet (af) of water for environmental, irrigation, and municipal and industrial uses. WWD distributes water from the CVP to farms and municipalities on a prioritized basis. WWD's regulations define the full allocation of agricultural water within its district.

Soils across the Project site consist predominately of Cerini sandy- and clay-loams, and Panoche clay-loam and loam all on slopes of 0-5%. All four soil types exhibit characteristics of moderately high permeability and moderate susceptibility to sheet and rill erosion.

Existing land uses surrounding the Project site consist of agricultural land, including thousands of acres of pistachio orchards owned and operated by affiliated entities that would be served by the proposed processing facilities. Approximately 320 acres of non-irrigated agricultural land is located to the west of the site (APN 038-300-14S). The state Farmland Mapping and Monitoring Program (FMMP) map for the County identifies areas to the north, east and west as prime agricultural land, most of which is planted with pistachio trees. A solar power generation facility is located approximately 2 miles northeast of the site. The California Aqueduct is located approximately 1 mile north. A water pipeline extends from an existing turnout in the Aqueduct along the eastern border of the site. A metered connection will be installed on the pipeline to

provide water for the Project. Residential and related commercial land uses are located in Three Rocks, approximately 1.5 miles southeast of the main Project processing facilities. An existing electrical power line extends from the Giffen Substation operated by PG&E east to State Route 33, south to Kamm Avenue, and east along the northern border of the site.

Regulatory Setting

Federal Agencies and Regulations

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

Federal Emergency Management Agency (FEMA)

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

State of California Regulations

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), located in Sacramento, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate activities which may adversely affect the quality of waters of the State to attain the highest water quality which is reasonable, considering a full range of demands and values. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water. Much of the implementation of the SWRCB's

responsibilities is delegated to nine Regional Water Quality Control Boards (RWQCBs). The proposed Project site is located within the jurisdiction of the Central Valley RWQCB.

California Water Code

The Federal CWA establishes certain guidelines for the states to follow in developing programs for the control of surface water pollution and for planning the development and use of water resources. Under certain circumstances, the CWA allows the federal Environmental Protection Agency (EPA) to withdraw the primary responsibility for these programs from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The regional plans must conform with the policies set forth in the Porter-Cologne Act and established by the State water policy adopted by the SWRCB. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Code section 10910 (SB 610)

Water Code section 10910 (SB 610) requires that a lead agency obtain a water supply assessment from an applicable public water system for certain projects subject to the California Environmental Quality Act, which are defined as (a) a residential development of more than 500 dwelling units; (b) a shopping center or business employing more than 1,000 persons or having more than 500,000 square feet of floor space; (c) a commercial office building employing more than 1,000 persons or having more than 250,000 square feet; (d) a hotel or motel with more than 500 rooms; (e) an industrial or manufacturing establishment housing more than 1,000 persons or having more than 650,000 square feet or 40 acres; (f) a mixed use project containing any of the foregoing; or (g) any other project that would have a water demand at least equal to a 500 dwelling unit project. As discussed below and in Section 3.19, the Project will be supplied under contracts to use irrigation water available to adjacent pistachio growers, and 80 to 90 percent of this supply will be returned to and reused by the pistachio growers. Refer to Impact Section 3.10-2 herein for the discussion pertaining to the Water Supply Assessment that was prepared for the Project.

Regional Water Quality Board

The Central Valley RWQCB administers the NPDES storm water-permitting program in the Central Valley region, including Tehachapi. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan must include specifications for Best Management Practices

(BMPs) that will be implemented during proposed construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the SWRCB and the Central Valley RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established in the California Storm Water Best Management Practice Handbook (2003), and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP describes measures to prevent or control runoff degradation after construction is complete, and identifies a plan to inspect and maintain these facilities or project elements.

Sustainable Groundwater Management Act

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA) (Water Code §10720 et seq.). SGMA requires that groundwater basins designated by the state Department of Water Resources (DWR) as high priority and/or critically overdrafted must be managed under a Groundwater Sustainability Plan (GSP) that avoids "undesirable results" as defined in the Act within 20 years from January 31, 2020. The GSP must be developed by a Groundwater Sustainability Agency (GSA) approved by the DWR. The WWD service area boundary largely overlaps with DWR-designated San Joaquin Valley groundwater subbasin 5.22-9, which is commonly called the "Westside Subbasin." The DWR has designated the Westside Subbasin as high priority and critically overdrafted, and SGMA requires that a GSP be adopted by an approved GSA for the subbasin by January 31, 2020. The WWD is the lead GSA for the Westside Subbasin and submitted a GSP to the DWR in accordance with SGMA requirements.

<u>Local Regulations</u>

Fresno County General Plan

The following lists goals and policies from the Fresno County 2000 General Plan pertaining to hydrology and water quality that are applicable to the proposed Project.

Policy ED-A.24 Recognizing that certain critical requirements of food processing industries, such as wastewater treatment, may require innovative, regional solutions, the County shall support and encourage technology development programs through collaboration with research institutions, such as the California Agriculture Technology Institute at CSU Fresno, and other responsible agencies, for use by industries and cities to support the expansion of agricultural industries.

Policy HS-C.5 Where existing development is located in a flood hazard area, the County shall require that construction of flood control facilities proceed only after a complete review of the environmental effects and a project cost/benefit analysis

Policy HS-C.9 The County shall prohibit the construction of essential facilities in the 100-year floodplain, unless it can be demonstrated that the facility can be safely operated and accessed during flood events.

Policy HS-C.10 The County shall require that all placement of structures and/or floodproofing be done in a manner that will not cause floodwaters to be diverted onto adjacent property, increase flood hazards to other property, or otherwise adversely affect other property.

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.

Policy LU-C.8 Fresno County shall take into consideration the presence of the regulatory floodway or other designated floodway, the FEMA-designated 100-year floodplain, estimated 250-year floodplain, the Standard Project Flood, and the FMFCD Riverine Floodplain Policy in determining the location of future development within the San Joaquin River Parkway area. Any development sited in a designated 100-year floodplain shall comply with regulatory requirements at a minimum and with the FMFCD Riverine Floodplain Policy criteria, or requirements of other agencies having jurisdiction, where applicable.

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.25 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.

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.

Policy OS-A.29 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.

Policy PF-A.2 The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.

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.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- 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:

    i. result in substantial erosion or siltation on- or offsite;

    ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

    iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

    iv. impede or redirect flood flows?

- In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impacts and Mitigation Measures

Impact 3.10-1: *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less Than Significant With Mitigation. The Project has the potential to impact water quality standards and/or waste discharge requirements during construction (temporary impacts) and operation (polluted stormwater runoff due to an increase in impervious surfaces and process water re-use).

The Project proposes to construct a total of approximately 40 acres (1.7 million sq. ft.) of new impervious surfaces (structures/roofs, ground surfacing of asphalt and concrete) and approximately 76 acres of pervious landscape soil/grass within the 315.5-acre site. Approximately 200 acres of the 315.5-acre site will remain as existing bare soil/tilled ground with no changes proposed by the Project. Because the Project proposes no change in run-off conditions for these 200 acres, they are not included in the calculation of run-off resulting from the Project. Tables 3.10-1 and 3.10-2 show calculations for existing runoff and proposed Project runoff, respectively.

Table 3.10-1
Existing Runoff[1]

Area Description	Area (Square Feet)	Area (Acres)	Volume (Cubic Feet)	Volume (Cubic Yards)	Volume (Acre Feet)
Bare dirt	13,754,506	315.8	1,031,588	38,207	24

[1] Hydrology & Water Quality Analysis for the Kamm Avenue Processing Plant. Prepared by Provost & Pritchard. See Appendix F, page 1-7.

Table 3.10-2
Proposed Project Runoff[2]

Area Description	Runoff Coefficient C	Area (Square Feet)	Area (Acres)	Rainfall Intensity, I	Volume Req. (Cubic Feet)	Volume Req. (Cubic Yards)	Volume Req. (Acre Feet)
Asphalt Concrete (parking area & driving paths)	0.7	1,023,586	23.50	0.5	358,255	13,269	8
Concrete	0.8	511,000	11.73	0.5	204,400	7,570	5
Roofs	0.8	204,369	4.69	0.5	81,748	3,028	2
Subtotal Impervious Area		**1,738,955**	**40**	**0.5**	**644,403**	**23,867**	**15**
Pervious landscape soil & grass	0.15	3,734,088	86	0.5	280,057	10,372	6
Total Basin Volume		**5,473,043**	**126**		**924,459**	**34,239**	**21**

Construction

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed Project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, "good housekeeping"

[2] Ibid.

procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These best management practices (BMPs) would be required in the Storm Water Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction activities. When properly designed and implemented, these "good-housekeeping" practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the NPDES Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Central Valley RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the Central Valley RWQCB and are an existing regulatory requirement. Implementation of Mitigation Measure HYD - 1 would ensure that the proposed Project would have a less ***than significant impact*** relative to potential construction period impacts.

<u>Operations</u>

Operational Stormwater

The long-term operations of the proposed Project could result in long-term impacts to surface water quality from stormwater runoff. The proposed Project would result in new impervious areas associated with site improvements, including new asphalt, concrete and the proposed structures on site as identified in Table 3.10-2. Runoff typically contains oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals) and other pollutants. Precipitation early in the rain season displaces these pollutants into storm water resulting in high pollutant concentrations in initial wet weather runoff. This initial runoff with peak pollutant levels can be referred to as the "first flush" of storm events.

Based on the current site topography, the site currently slopes generally to the northeast. To take advantage of the site's current aspect, a storm water collection basin is proposed in the northeast corner of the northerly 80-acre portion of the Project site, in close proximity to the majority of the

proposed main impervious Project processing facilities. The basin will be designed to hold all Project-generated on-site run-off.

The Project's new impervious surfaces will result in approximately an additional 15 acre-feet per year (AFY) of surface run-off. Using the rational method areas were calculated for each proposed impervious surface type, which included asphalt, concrete, and roofs. Impervious areas for the Project comprise approximately 40 acres. Pervious surface including areas proposed as landscape soil/grass comprise approximately 76 acres of the 315.5-acre Project site. Fresno County design standards for permanent retention basins were utilized in calculating the proposed runoff. A rainfall intensity (I) of 0.50 was utilized and runoff coefficients for each specific proposed area of Project improvements were obtained as shown in the tables above. A total of 15 AFY of runoff water will be produced by the proposed 40-acre impervious improvements and an additional 6 AFY of runoff water will be produced by the pervious landscape soil/grass area improvements; thus, requiring a basin retention volume storage of approximately 21 acre-ft which will be provided by the Project (for more detail, please see Impact 3.10-3 below).[3]

Operational Process Water and Irrigation Water Reuse

The Project could impact surface or groundwater quality through the use of recaptured process water for irrigation reuse in offsite land application areas and the deposit of processing solids, such as shells, precleaning waste and hulling residue, most of which will be conveyed for beneficial reuse offsite, within the main Project area and to portions of the adjacent solid materials management site. Based on water quality data from similar pistachio processing facilities, the irrigation reuse water would contain approximately 150 parts per million (ppm) of total Kjeldahle nitrogen, 600 ppm of potassium, 4200 ppm of biochemical oxygen demand (BOD) and 3700 ppm of total dissolved solids (TDS). The Project would also generate approximately 13 million pounds of hulling residue with a 12 percent moisture content after pressing, 5 million pounds of precleaning twigs, leaves and similar pistachio tree materials, and 6 million pounds of empty pistachio shells per year. Approximately 80-90 percent of the Project's annual water use would be returned to and reused for irrigation by the adjacent pistachio growers. Dewatered hulling residue will be conveyed offsite for beneficial reuse, primarily to dairies. Other processing solids, such as shells and precleaning materials will be marketed for beneficial reuse, and any such solids that cannot be reused will be shredded and disked into the unused portions of the 315 acre Project site and the 160-acre adjacent solid management site. The discharge of the irrigation reuse water,

[3] Hydrology & Water Quality Analysis prepared by Provost & Pritchard. See Appendix F, page 1-10.

and the potential deposition of residual amounts of shell and precleaning materials that are not sold for reuse could significantly affect surface and groundwater if they result in increases in constituent loads that would violate any water quality standards or waste discharge requirements, otherwise substantially degrade surface or ground water quality, or conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

The discharge and irrigation reuse of the Project's recaptured process water and deposition of solids to land would be subject to the terms and conditions of Waste Discharge Requirements (WDRs) issued by the Central Valley RWQCB. Multiple pistachio processing plants with similar operational characteristics as the Project have been issued WDRs by the Central Valley RWQCB, including the El Dorado plant located to the north of the Project in Fresno County. El Dorado is a pistachio processing plant that discharges up to 42 million gallons of process water per year, and up to 2.5 million gallons per day, on a 600-acre pistachio orchard land application area. Solids are removed from the facility's settling pond and deposited on an 80-acre solid reuse area. Prior to issuing WDRs for the facility, the Central Valley RWQCB prepared and approved a Mitigated Negative Declaration (MND) for the proposed water and solid discharges and determined that, with mitigation, "there is no evidence that the issuance of WDRs …will have a significant effect on the environment." The mitigation measures adopted by the Central Valley RWQCB and also incorporated into the WDRs for the facility include annual, maximum daily, and average seasonal water discharge limits, agronomical application rates for nitrogen and hydraulic loading, a cycle average BOD loading rate, discharge prohibitions during and immediately after rainy periods, proper solid management and annual soil sampling within solid materials management areas, and the preparation and implementation of a salinity control plan and a wastewater and nutrient management plan within 180 days of the issuance of the WDRs.

The WDR states that with an average BOD concentration of 6,700 mg/L, and a maximum flow rate of 2.5 mgd, instantaneous BOD loading rates could range from about 200 lbs/acre/day to as high as 2,300 lbs/acre/day. The WDR concluded that, given the short processing season, soil lithology, depth to groundwater, and implementation of best management practices, monitoring of the application areas, and resting periods between applications, the discharge would not be expected to cause groundwater degradation due to organic loading. The WDR further requires a cycle average BOD loading rate of 100 lbs/acre/day.

For nitrogen, with an average nitrogen concentration of about 227 mg/L, an annual maximum discharge of 42 million gallons per year, and a 600 acre land application area, the WDR concluded that nitrogen loads would be about 132 lbs/acre/year, less than the nitrogen uptake for pistachios

of 200 to 250 lbs/acre/year. The WDR concluded that with proper management of the discharge water, and proper application of additional fertilizers, nitrogen loads of this magnitude would not degrade groundwater for nitrates.

For salinity, the WDR states that with an average EC and TDS of 3,800 umhos/cm and 5,200 mg/L, respectively, the El Dorado facility water discharge exceeds local groundwater quality. The WDR further states that there are no specific water quality objectives set for EC and TDS and that almost half of the salinity in the pistachio facility discharge water is from organic dissolved solids, which will break down in the soil profile. Much of the remaining portion is from potassium, which is a major plant nutrient that moves slowly through the soil profile and is readily taken up by crops. Given the short processing season, with depth-to-groundwater at greater than 350 feet below ground surface, and percolation of the discharge water through soils of alternating layers of sands and clays, the WDR found that the potential for the irrigation reuse water to reach and significantly impact groundwater was minimal. According to California Department of Water Resources Data Library there is a well located approximately one-half mile to the east of the Project site that has depth to groundwater recorded at 490 feet. Therefore, the Project's irrigation reuse water has a minimal likelihood of reaching and significantly impacting groundwater.

For chloride, with an average concentration of 113 mg/L, the WDR concluded that due to generally poor quality groundwater near the El Dorado plant and settling ponds, and dilution of discharge water with higher-quality irrigation water, the facility would avoid significant chloride impacts to groundwater.

For potassium, the WDR concluded that with an average concentration of about 1,024 mg/L and an annual discharge of 42 million gallons, the El Dorado facility would result in a potassium load of about 600 lbs/acre/year, about three times higher than the general agronomic rate for potassium of about 200 lbs/acre/year for pistachio trees. The WDR found that potassium readily binds to soil, and crops can and will take up more potassium than required, if available, with no reduction in yield and did not include potassium load limits.

The Project would produce a maximum of 58.8 million gallons of irrigation reuse water during the harvest season assuming a recapture rate of 90 percent. The Project has contracted with adjacent growers to reuse this water for pistachio orchard irrigation on 2,556 acres of irrigated land, more than five times the land application area considered in the El Dorado WDR and MND. As a result, the Project will be able to manage the application of irrigation reuse water to meet the

performance standards required by the Regional Board.[4] Implementation of mitigation measures HYD-2 through HYD – 11 will reduce potential water quality impacts from irrigation reuse water to a ***less than significant*** level.

Wastewater/Sewer

A septic system with five septic tanks would be installed in the Project Area to support the restroom facilities and sewage needs of the facility's full-time and seasonal staff and employees. See Sections 3.19-1, 3.19-2 and 3.19-5 (Utilities and Service Systems) for a discussion regarding waste discharge requirements, wastewater characteristics and water quality standards pertaining to Project-related septic systems for wastewater. With mitigation, the Project will not result in a violation of any water quality standards or waste discharge requirements and therefore will result in a ***less than significant impact***.

Mitigation Measures:

HYD - 1: Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the Central Valley RWQCB has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by County of Fresno and the Central Valley RWQCB. The SWPPP will be kept on site during

[4] Hydrology & Water Quality Analysis for the Kamm Avenue Processing Plant. Prepared by Provost & Pritchard. See Appendix F, pages 2-6 and 2-7.

construction activity and will be made available upon request to representatives of the Central Valley RWQCB.

HYD - 2: Discharge to the settling ponds shall not exceed the more restrictive of: (1) a maximum daily flow of 1.62 mgd, an average daily flow for the season of 1.4 mgd, or an annual flow for the season of 58.8 million gallons; or (2) flow limits in the Project WDRs issued by the Central Valley RWQCB.

HYD - 3: The cycle average BOD loading rate to the land application areas shall not exceed the more restrictive of (1) 100 lbs/acre/day; or (2) BOD loading rates in the Project WDRs issued by the Central Valley RWQCB.

HYD – 4: Hydraulic loading of irrigation reuse water and other irrigation water shall not exceed the more restrictive of: (1) reasonable agronomic rates designed to minimize the percolation of wastewater and irrigation water below the root zone (i.e., deep percolation) or (2) hydraulic loading rates in the Project WDRs issued by the Central Valley RWQCB.

HYD - 5: Application of waste constituents in irrigation reuse water shall not exceed the more restrictive of: (1) reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management, and the annual nutritive loading to the land application areas, including the nutritive value of organic and chemical fertilizers and of the wastewater, shall not exceed the annual crop demand, except for potassium; or (2) nutritive constituent loading rates in the Project WDRs issued by the Central Valley RWQCB.

HYD - 6: Irrigation with irrigation reuse water shall not be performed within the more restrictive of: (1) 24 hours of a storm event of measurable precipitation or when soils become saturated; (2) storm event and soil saturation limits in the Project WDRs issued by the Central Valley RWQCB.

HYD - 7: Within 180 days of the issuance of the Project WDRs by the Regional Board the Project shall submit for Central Valley RWQCB approval and implement the more restrictive of: (1) a Wastewater and Nutrient Management Plan with procedures for monitoring the land application areas, including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or

nuisance conditions, calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, and commercial fertilizers are applied at agronomic rates, except for potassium; or (2) a Wastewater and Nutrient Management Plan specified in the Project WDRs issued by the Central Valley RWQCB.

HYD - 8: Within 180 days of the issuance of the Project WDRs by the Regional Board the Project shall submit for Regional Board approval and implement in accordance with such approval the more restrictive of: (1) a Salinity Control Plan that incorporates current best practices that have been implemented in other pistachio processing plants in the region, such as in the Salinity Control Plan prepared in 2019 under WDR Order No. R5-2018-0005, to further reduce the salinity of the discharge to the maximum extent feasible, including an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan; or (2) a Salinity Control Plan as specified in the Project WDRs issued by the Central Valley RWQCB.

HYD - 9: No pistachio processing solids generated by the Project shall be applied in 100-year flood hazard zones mapped by the Federal Emergency Management Agency within the 160-acre solids materials management site or within the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds.

HYD - 10: Pistachio processing solids generated by the Project shall be managed by the more restrictive of: (1) even application and incorporation into the soil within the applicable portions of the 160-acre solids materials management site and the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds as needed, to prevent odors and nuisance conditions; or (2) in accordance with solid management requirements specified in the Project WDRs issued by the Central Valley RWQCB.

HYD - 11: Soil samples at each location where solids generated during the pistachio season have been applied and incorporated into the soil shall be taken, analyzed for constituents of concern and reported to the Central Valley RWQCB by the more restrictive of: (1) once per year (2) in accordance with the sampling and reporting requirements in the Project WDRs issued by the Central Valley RWQCB.

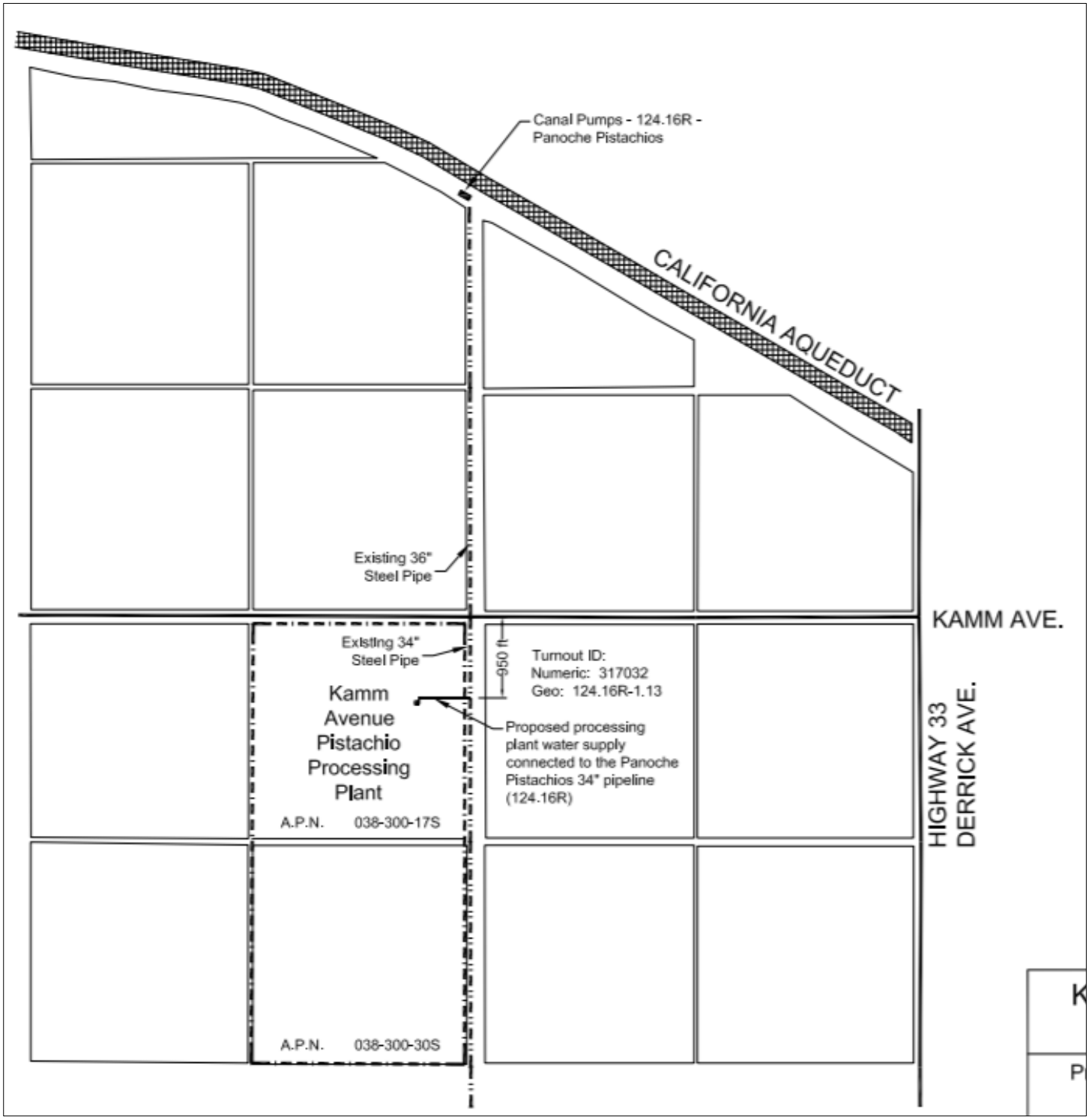
HYD - 12: Any unknown water wells or septic systems that may be discovered during construction activities shall be properly destroyed by an appropriately licensed contractor in compliance with the Fresno County Department of Public Health, Water Surveillance Program.

Impact 3.10-2: *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. A Water Supply Analysis (Appendix G) was prepared to evaluated Project-related water requirements and associated environmental impacts. Project water would be supplied under contracts with pistachio growers that have existing water supply allocations with the Westlands Water District (WWD) from existing conveyance facilities that extend from the California Aqueduct to a pipeline traversing the east side of the Project area (See Figure 3.10-1). The Project will contract with the affiliated growers in the vicinity to obtain sufficient water supplies to operate the processing plant during average, dry and multiple year drought conditions. The Project will also contract with a participant in an existing water banking program for the use of stored CVP water if required during exceptionally dry periods. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local pistachio growers for irrigation. No groundwater would be used for this Project. All process and domestic use water would be surface supplies delivered from the California Aqueduct via pipeline to the site.

The Project land and pistachio orchards owned and operated by affiliated entities in the vicinity of the Project are within the WWD service area. All of these lands have an annual allocation per acre of surface water imported by WWD through the federal Central Valley Project. WWD surface water used in the Project region is conveyed through turnouts located along the California Aqueduct to distribution pipelines that deliver the water to local distribution facilities for pistachio orchard irrigation. An existing 34-inch water distribution pipeline is located along the eastern border of the site and extends to existing turnout facilities in the Aqueduct. The Project will install connection and metering equipment on the existing pipeline to deliver water supplies necessary to operate the processing plant (see Figure 3.10-1).

Figure 3.10-1
Existing Aqueduct and Water Distribution Line
and Proposed Project Connection

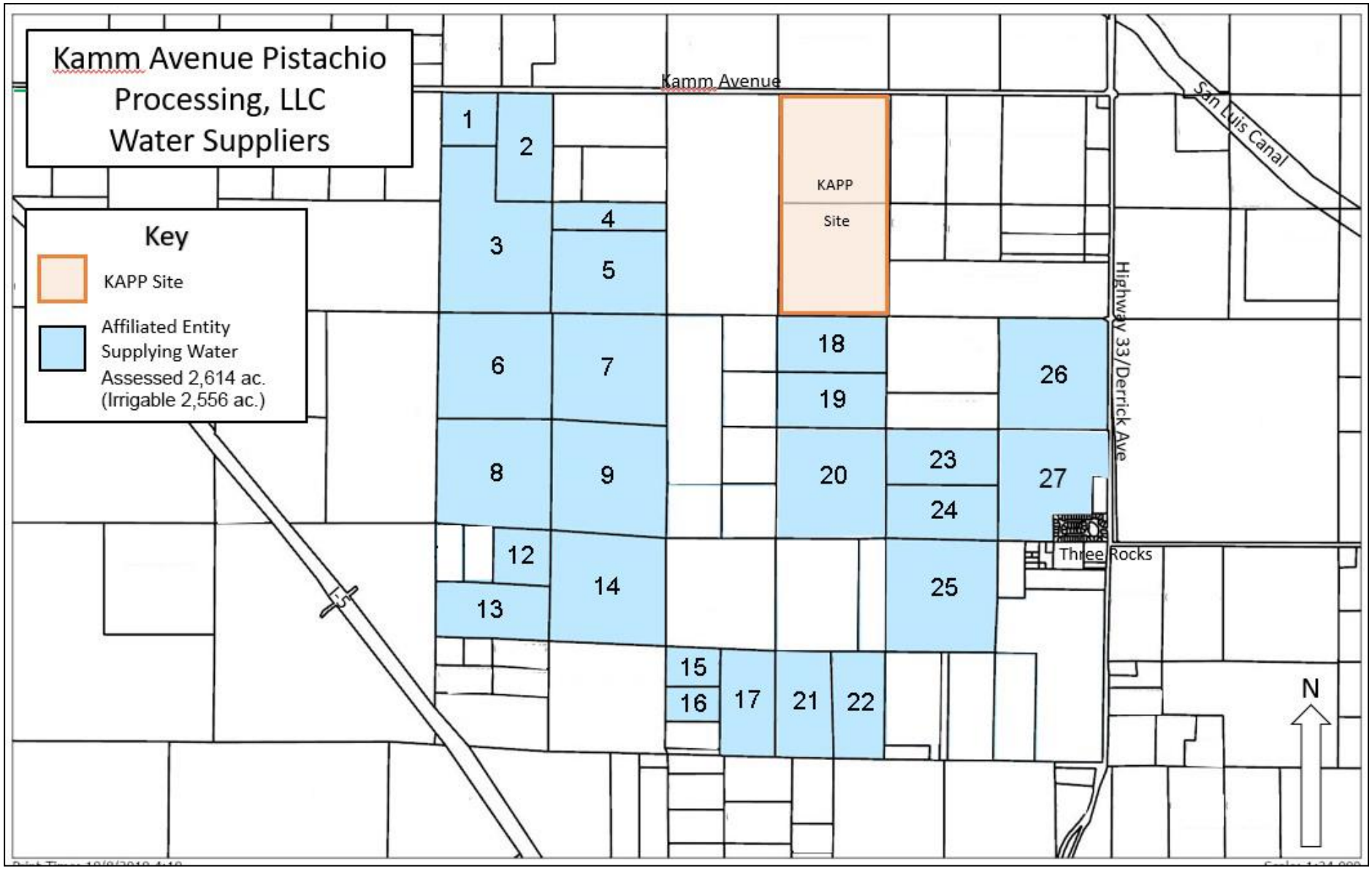


Surface water supplies in California, including the surface water provided to users in the Project region by WWD, are subject to variability due to hydrologic conditions and regulatory requirements. The Project will contract with affiliated entities that have surface water allocations from WWD for 2,556 acres of irrigated land as identified in Figure 3.10-2 and Table 3.10-3. These allocations include rights to use certain drier year water supplies, such as stored "carryover" water. The Project will purchase water from the contracting growers to meet demand, and WWD will supply the water in accordance with an approved municipal and industrial (M&I) account for the Project. The Project will also contract with a participant in the existing Semitropic Water Bank to use currently stored Central Valley Project water to supplement Project water supplies if necessary during exceptionally dry periods. No groundwater will be used for Project purposes.

Table 3.10-3
Regional Growers Contracting to Supply Project Water APN and Acreage
(From Figure 3.10-2)

Map Location Number	Assessor's Parcel Number	Acres		Map Location Number	Assessor's Parcel Number	Acres
1	038-141-54S	38.1		16	038-210-27S	25
2	038-141-56S	77.88		17	038-210-54S	80
3	038-141-55S	200		18	038-210-08	80
4	038-141-52	40		19	038-210-09	80
5	038-141-53	120		20	08-210-10S	160
6	038-210-01	160		21	038-210-69S	80
7	038-210-02S	160		22	038-210-70S	80
8	038-210-42S	160		23	038-210-14S	80
9	038-210-03S	160		24	038-210-15S	80
12	038-210-39S	40		25	038-210-74S	160
13	038-210-37S	80		26	038-210-63S	157.29
14	038-210-38S	160		27	038-210-76S	130.99
15	038-210-26	25				

Figure 3.10-2
Regional Growers Contracting to Supply Project Water (See Table 3.10-3 for corresponding APN and acreage)



The Project will use filtered and chlorinated water for the hulling process during the harvest, for onsite fire suppression, and for onsite landscaping. Hulling water would be supplied from an existing adjacent pipeline and routed through four sand and media raw water filters to remove solids. Extracted solids from the filtration process will be conveyed to the huller pit located under the hulling canopy. The filtered water will be chlorinated and stored in a 353,000 huller storage tank. The Project will construct and operate onsite water treatment facilities to produce water that meets domestic use standards for periodic process equipment, bin, and silo washing and employee consumption. Water will be conveyed from the huller water storage tank to the domestic water treatment system, including three domestic water filters, and will be stored in a 40,000-gallon domestic water tank. The onsite domestic water system will be permitted by the County and the State Water Resources Control Board and will meet all applicable water quality requirements for domestic use.

Hulling process and domestic equipment wash water used in the facility will be directed to a hulling water and hull residue collection pit under the hulling canopy. Water and hull residue in the collection pit will be conveyed through two 18-inch diameter underground pipe to agitator, separator, and screen equipment to be constructed just north of two process water settling and cleaning ponds on the southeast border of the site. The hulling residue will be dewatered to a moisture content of approximately 12 percent and loaded into trucks at an adjacent loading dock for beneficial reuse offsite. The process water will be conveyed to two settling and cleaning ponds with a combined storage capacity of 32.59 million gallons, or 100 acre-feet. The process water will be used for pistachio crop irrigation in immediate vicinity of the Project in accordance with Waste Discharge Requirements that will be issued by the Central Valley RWQCB.

Most of the Project's water demand will occur during the 6-week harvest period and be used in the hulling process using process water. Hulling operations would require up to 1.8 million gallons (5.5 acre-feet) per day. This is the maximum amount of water that would be used daily during the harvest period, however, the maximum amount will not be needed every day during the harvest period and will fluctuate downward on some days. The Project will use a total of 64.9 million gallons of process water (199.3 acre-feet) for hulling per harvest each year. The huller tank will also maintain a supply of 100,000 gallons of process water (0.3 acre-feet) for fire suppression purposes in accordance with Fresno County Fire Department requirements. Approximately 350,400 gallons (1.07 acre-feet) per year of process water from the huller tank would be also be used for onsite irrigation. Total Project process water demand will be approximately 65.4 million gallons (200.7 acre-feet) per year. During the non-harvest season, process water will only be used for on-site irrigation and fire suppression purposes.

Domestic water will be used for process equipment washing, which will occur 60 times per year. Process equipment washing will require 2,125,000 gallons (6.5 acre-feet) of domestic water per year. Bins used to store work in progress product will be washed 4 times per year, and each silo will be washed once per year. These activities will require approximately 285,00 gallons (0.9 acre-feet) of domestic water per year. Employee consumption will require approximately 315,000 gallons (1.09 acre-feet) of domestic water per year.

Table 3.10-4 summarizes the Project's total annual process and domestic water demand by primary use. The Project will require a total of approximately 68.1 million gallons (209 acre-feet) per year.

Table 3.10-4
Estimated Annual Water Demand for the Project

	Gallons	Acre-feet
Process water		
Hulling wash (harvest period only)	64,945,433	199.3
Fire suppression	100,000	0.3
Landscaping	350,400	1.08
Total Process	*65,395,833*	*200.7*
Domestic Water		
Process equipment wash	2,125,000	6.5
Bin wash	168,000	0.5
Silo wash	117,600	0.4
Employee	315,000	1.0
Total Domestic	*2,725,600*	*8.4*
Total Project water demand	**68,121,433**	**209**

The Project will recover and provide for irrigation reuse approximately 80 to 90 percent of the water supplied to the facility, or from 167 to 188 acre-feet per year. Irrigation water from Plant

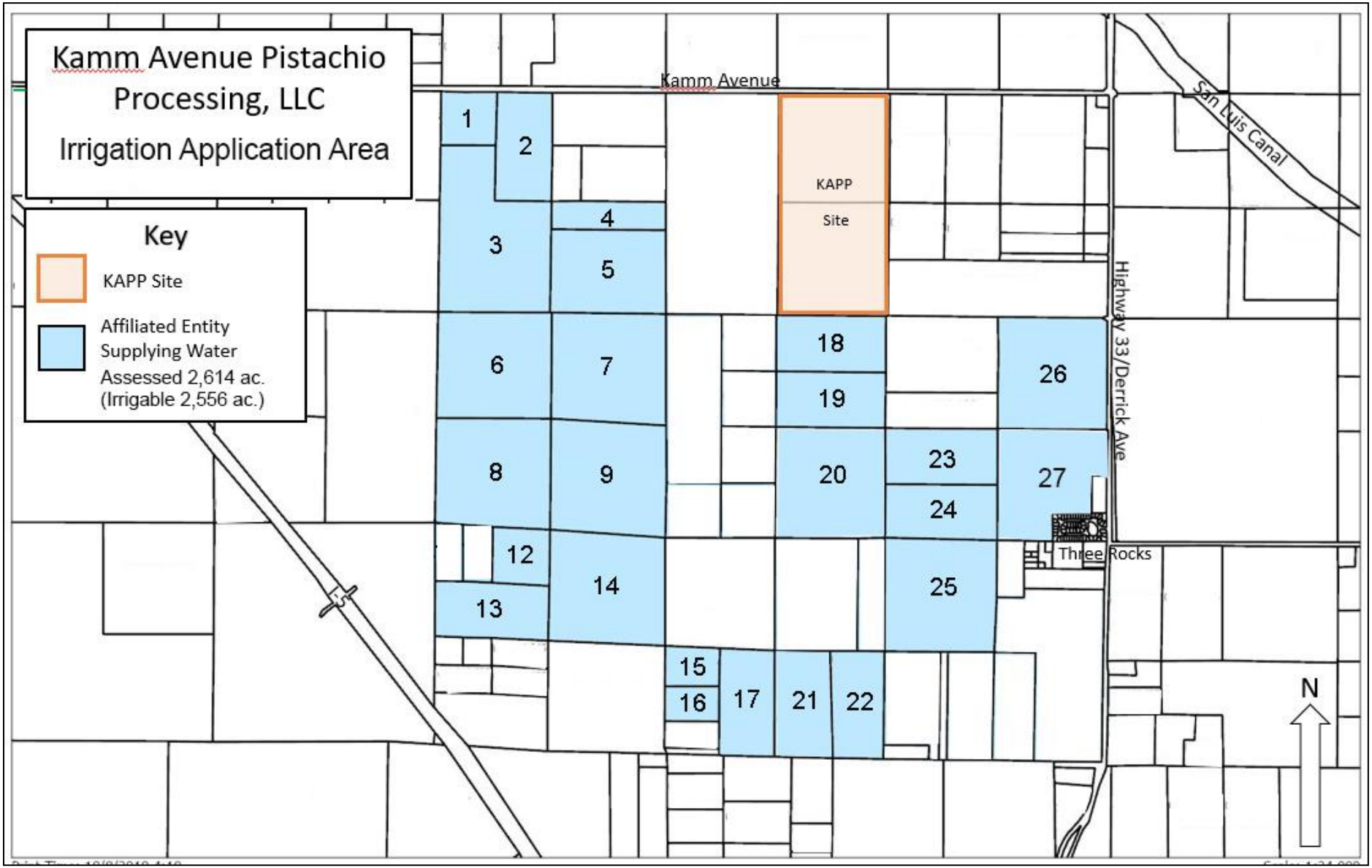
operations will be supplied to pistachio growers in the region from the process water settling and cleaning ponds located on the southern border of the site. This water will be conveyed from the ponds through existing offsite irrigation water distribution facilities. Based on water quality information from existing pistachio processing plants using similar source water, including anticipated nitrogen, potassium, and biochemical oxygen demand (BOD) levels that have been permitted in existing WDR orders adopted by the Regional Board, irrigation water from the Project would be used on a minimum of two acres of land per acre-foot to meet applicable water quality requirements. The water application area would include the 2,556 acres of land contracted to supply water for the Project, which would provide sufficient acreage to apply water from the facility at agronomical rates and in amounts that will meet applicable water quality requirements in the vicinity of the proposed facility as identified in Figure 3.10-3 and Table 3.10-2.

Based on information from similar processing facilities, approximately 80 to 90 percent of all water supplied to the Project will be captured, cleaned and distributed as irrigation reuse water in the vicinity of the Project. Consequently, the Project will not significantly affect the net supply of water for pistachio irrigation in the region. Therefore, the Project will have ***less than significant impacts*** to groundwater supplies and would not conflict with groundwater sustainability management plans that have been developed by WWD for regional aquifers.

Mitigation Measures

None are required.

Figure 3.10-3
Project Irrigation Water Application Locations (See Table 3.10-3 for corresponding APN and acreage)



Impact 3.8-3: *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

i. result in substantial erosion or siltation on- or offsite;

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows?

Less Than Significant. As described in impact Section 3.10-1 herein, the Project proposes to construct a total of approximately 40 acres (1.7 million sq. ft.) of new impervious surfaces (structures/roofs, ground surfacing of asphalt and concrete) and approximately 76 acres of pervious landscape soil/grass within the 315.5-acre site. Approximately 200 acres of the 315.5-acre site will remain as existing bare soil/tilled ground with no changes proposed by the Project. Because the Project proposes no change in run-off conditions for these 200 acres, they are not included in the calculation of run-off resulting from the Project. Tables 3.10-1 and 3.10-2 show calculations for existing runoff and proposed Project runoff, respectively.

Although the site will increase the rate and amount of surface runoff, all stormwater runoff from the constructed Project facilities will be directed to a new stormwater retention basin to be constructed in the northeast corner of the northerly 80 acre site. Water retained in the basin will evaporate or be absorbed in the upper portions of the underlying soil formations and have no contact with local groundwater, which occurs at a depth of approximately 450 feet. An estimated 21 AFY of stormwater runoff is expected to be generated by the Project's proposed impervious and pervious improvements, thus requiring a basin retention volume storage of approximately 21 acre-ft. The basin proposes to provide two feet of freeboard above the highest estimated elevation of water in the basin. The depth of the basin will be such that highest water elevation of water will not be above surrounding surface grade. The design of the basin, including inside and outside side slopes, will conform to County requirements and will not increase flood conditions on- or off-site outside the basin.

On-site soils are moderately susceptible to sheet and rill erosion, however, proposed hardscape and landscape surfacing of the site will minimize potential for significant erosion of on-site soils.

The retention basin will capture siltation over-time, which will be removed as necessary, pursuant to standard basin maintenance tasks.

The rate and amount of surface runoff is determined by multiple factors, including topography, amount and intensity of precipitation, amount of impervious surfacing, amount of evaporation that occurs in the watershed, and amount of precipitation and imported water that infiltrates to the groundwater. The Project would not alter any precipitation amounts or intensities. The Project will involve the importation of surface water from the California Aqueduct of which 209 AFY will be used for pistachio processing, distribution of wastewater for irrigation reuse water via on-site pipelines to collection basins, and distribution of said irrigation reuse water back to area farms for land application. The Project's approximately 136-acre site development area would not significantly alter the overall topography of the area, and will utilize the natural direction of drainage flow on the site to necessitate only minimal grading to direct stormwater collection to the stormwater retention basin.

In addition, the Project would not alter precipitation amounts or intensities, evaporation rates, or the amount of precipitation that infiltrates into the ground water. Additionally, the amount of imported water used for construction of the project (such as water used for dust suppression) would not substantially alter groundwater infiltration rates. Therefore, the rate or amount of surface runoff resulting from the Project would not significantly change relative to existing conditions.

Any increase in surface water runoff resulting from permanent project features would be contained on-site in a retention basin sized to collect the calculated run-off and would not influence surface runoff in a manner which would result in flooding on-site or off-site.

The retention basin will be designed to contain all on-site generated run-off and thereby avoid including stormwater flooding, and would prevent any offsite stormwater discharges from the developed pistachio processing areas from occurring.

Therefore, impacts are ***less than significant***.

Mitigation Measures

None are required.

Impact 3.10-4: *In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?*

Less Than Significant With Mitigation. As shown in Figure 3.10-4, the site lies adjacent and to the north and east of a flood hazard Zone A as mapped by the FEMA, Panel No. 06019C2500H. This zone is described by FEMA as having no base flood elevation determined from a 100-year storm event. Because the FEMA flood hazard zone does extend onto the 315-acre portions of the Project site where buildings and other improvements, including the processing facility, will be constructed and operated, and because the proposed retention basin will be designed to capture the increase in stormwater runoff generated by the Project, it is not anticipated that the Project will impede or redirect flood flows.

Tsunamis are giant waves caused by earthquakes or volcanic eruptions under the sea. Out in the depths of the ocean, tsunami waves do not dramatically increase in height. But as the waves travel inland, they build up to higher and higher heights as the depth of the ocean decreases. The speed of tsunami waves depends on ocean depth rather than the distance from the source of the wave. Tsunami waves may travel as fast as jet planes over deep waters, only slowing down when reaching shallow waters. While tsunamis are often referred to as tidal waves, this name is discouraged by oceanographers because tides have little to do with these giant waves.

The site is situated on the floor of the Central Valley and is well inland from the Pacific Ocean which lies roughly 90 miles (as the crow flies) to the west. In addition, the Valley's westerly edge is formed by the Coastal Range mountains which rise to elevations in this area up to 3,000 ft. It is very unlikely the Project site could be adversely or significantly impacted by tsunami events emanating from the Pacific Ocean. The nearest mapped tsunami zones extend from the Pacific Ocean primarily along drainage ways east to the Salinas River in Monterey County, roughly 80 miles from the Project site and west of the Coastal Range.

Seismic seiches are standing waves set up on rivers, reservoirs, ponds, and lakes when seismic waves from an earthquake pass through the area. They are in direct contrast to tsunamis which are giant sea waves created by the sudden uplift of the sea floor.

The nearest sizeable body of water that could incur seiches would be Pine Flat Reservoir, a man-made lake which is roughly 70 miles to the east of the site. The elevation of the Pine Flat Dam is 941.5 ft. and was built for flood control purposes on the Kings River in the foothills of the western slopes of the Sierra Nevada mountain range. It is unlikely that seiches or even dam breach or failure would result in significant adverse effects to the Project site.

Figure 3.10-4 shows the FEMA designated Flood Hazard Zone nearest the site. A moderate rise in topography up to the west and south edges of the site directs flood flows away from the site. The site itself drains toward the north east naturally. Project activities would therefore not occur within any FEMA designated flood hazard areas and thereby would alter the flow the surface waters differently than how currently directed. The Project is designed to collect stormwater runoff from proposed new impervious surfaces in a planned stormwater retention basin situated in the northeast corner of the northerly-most 80-acre portion of the site, thereby taking advantage of the site's natural northeast aspect. To ensure impacts remain less than significant, implementation of Mitigation Measure HYD – 9 (from Impact 3.10-1) would avoid the discharge of solids generated by the Project in areas that are within mapped floodplains. With mitigation incorporated, impacts on area hydrology resulting from the Project will be ***less than significant***.

Mitigation Measures:

HYD - 9: No pistachio processing solids generated by the Project shall be applied in 100-year flood hazard zones mapped by the Federal Emergency Management Agency within the 160-acre solids materials management site or within the unused portions of the 315-acre facility site south of the processing plant fence line and north of the settling ponds.

Impact 3.10-5: *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less Than Significant. The Project will not use groundwater, including groundwater extracted from the Westside Subbasin, or groundwater from other locations. A Groundwater Sustainability Plan (GSP) has been submitted to DWR by WWD acting as the primary Westside Subbasin GSA that is intended to achieve all applicable SGMA requirements for the Subbasin. The requirements include avoiding undesirable results to groundwater supply and storage, groundwater quality, and subsidence. The primary projects and management actions that have been adopted in the Westside Subbasin GSP to comply with SGMA that could potentially affect groundwater conditions near the Project include: (1) a decrease in groundwater extraction from 1.3 AFY per acre to 0.6 AFY per acre during 2022-2030 to avoid reductions in groundwater supply and storage; and (2) the substitution of supplies other than groundwater in certain areas where subsidence due to groundwater extraction could occur, including the area in which the Project is located.

Project operations will not significantly affect the implementation of the Westside Subbasin GSP and the achievement of SGMA requirements. Approximately 80 to 90 percent of all Project water

supplied by local growers will be returned for irrigation reuse on the same land where the growers operate 2,556 irrigable acres of pistachios. Irrigation reuse water supplied for Project pistachio processing will maintain existing patterns of surface water application in the vicinity of the Project and have no significant project-level and cumulative impacts to the volume of groundwater recharge in the Westside Subbasin. The Project's small amount of net water consumption during processing will not induce significant new surface or groundwater demand by the growers. The Project will not use groundwater and will not directly or indirect impact subsidence risks in the Project area.

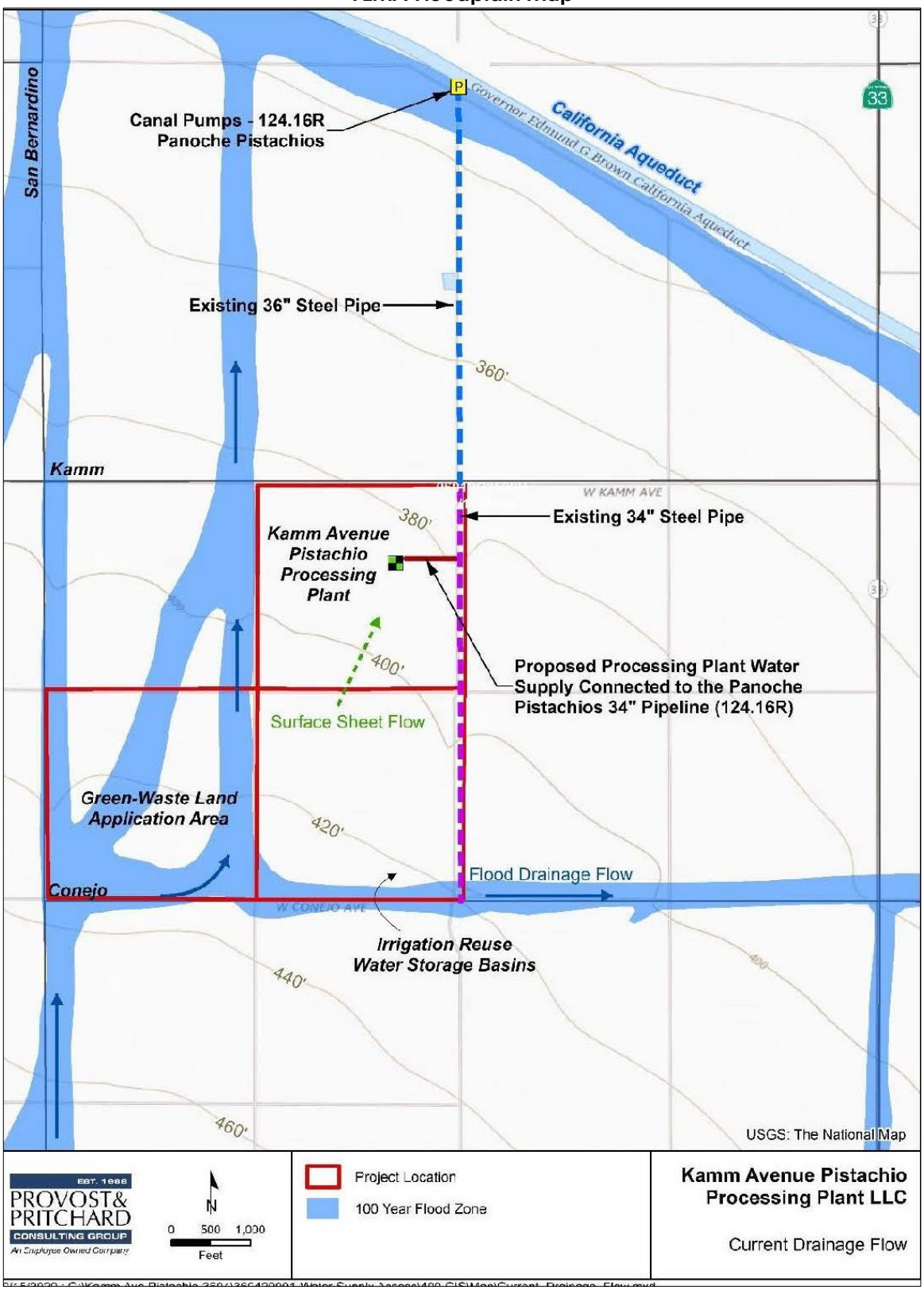
Consistent with the findings in other WDRs issued for similar facilities using the same or comparable quality surface source water, the facility will not deplete groundwater supplies or affect groundwater recharge. As in other permitted pistachio processing facilities, increased water usage at the processing facility will be discharged to cropland to replace irrigation water on existing agricultural land in the Project area.

Based on these considerations, the Project will not cause significant impacts related to substantial decrease in groundwater supplies, interfering substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin the last clause or obstructing implementation of a water quality control plan or sustainable groundwater management plan. Therefore, impacts are determined to be ***less than significant.***

Mitigation Measures

None are required.

Figure 3.10-4
FEMA Floodplain Map



Cumulative Impacts

Less Than Cumulatively Considerable. 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 determined impacts related to hydrology and water quality were less than significant with the incorporation of mitigation.

Development of the Project in combination with future agricultural and/or development projects in the area 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. As with the Project, each new development would be required to design and develop a stormwater collection system that ensures appropriate water quality protection measures and sufficient capacity. All projects would be required to implement Best Management Practices and to conform to the existing NPDES water quality regulations. Therefore, cumulative impacts associated with stormwater collection and water quality is less than significant.

The Project would not utilize groundwater. Project operations will not significantly affect the implementation of the Westside Subbasin GSP and the achievement of SGMA requirements. Approximately 80 to 90 percent of all Project water supplied by local growers will be returned for irrigation reuse on the same land where the growers operate 2,556 irrigable acres of pistachios. Irrigation reuse water supplied for Project pistachio processing will maintain existing patterns of surface water application in the vicinity of the Project, comply with applicable water quality requirements and WDRs, and have no significant project-level and cumulative impacts to the volume of groundwater recharge or water quality in the Westside Subbasin.

Therefore, the Project's hydrologic and water quality impacts are ***less than cumulatively considerable.***

3.11 Land Use and Planning

This section of the DEIR evaluates the potential environmental effects related to land use and planning associated with implementation of the proposed Project. No comments pertaining to this topic were received during the NOP public review period.

Environmental Setting

The proposed Project site is located on the Central Valley floor in western unincorporated Fresno County. The nearest major roadway intersection is West Kamm Avenue and State Route 33, approximately one mile to the east. I-5 is located approximately 2.5 miles to the southwest on the eastern edge of the Diablo Range foothills. The California Aqueduct is located approximately 1 mile to the northeast. The general latitude and longitude for the Project site is 36.523532° and -120.411545°.

The proposed Project will be built on portions of parcels with Assessor's Parcel Numbers (APN) 038-300-17S (a 155.8-acre parcel) and 038-300-30S (a 160-acre parcel), (See Figure 2-3). The 80-acre main processing plant will be located on the northern half of APN 038-300-17S. Access roads, an underground process water conveyance pipeline, and two lined process water settling and cleaning ponds with appurtenant dewatering and pumping equipment will be located on portions of the southern half of APN 038-300-17S and APN 038-300-30S. Approximately 134.6 acres of the combined 315.8-acre parcels would be used for the Project.

The project site is designated as Agricultural in the Fresno County General Plan and zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) (See Figure 2-4). The site is located in the Westlands Water District. The Project parcels are owned by Ventana South and were acquired in 2011. The parcels have not been used for commercial agricultural purposes since they were acquired. Historical records indicate that that the northern parcel, APN 038-300-17S, has not been used for agriculture since at least 2009. The southern parcel, APN 038-300-30S, has not been used for agriculture since 2006. Neither parcel contains soil identified as prime, statewide important, or unique farmland by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). The current FMMP map for Fresno County identifies the Project site as farmland of local importance, which includes all farmable lands within the County that do not meet the definitions of prime, statewide, or unique and land that is or has been used for irrigated pasture, dryland farming, confined livestock and dairy, poultry facilities, aquaculture and grazing. APN 038-300-17S and the western 80 acres of APN 038-300-30S are subject to existing Williamson Act Contract No. 365. The eastern 80 acres of APN 038-300-30S are subject to existing

Williamson Act Contract No. 1839. Notices of nonrenewal were filed with the County for the portions of these Williamson Act contracts applicable to the Project site on September 20, 2019.

The Applicant has applied to the Fresno County Department of Public Works and Planning (County) for Classified Conditional Use Permit Application No. 3685, a height variance (Variance Application No. 4085), and early termination of certain agricultural land conservation contracts (Williamson Act Contracts) to construct, operate, and maintain a pistachio processing plant with the capacity to process 60 million pounds of finished pistachio products per year (Project). The Project would provide pistachio processing capacity in the immediate vicinity of existing pistachio orchards that currently ship harvested crops for processing to more remote locations, including plants outside of the County.

Existing land uses surrounding the Project site (processing site and solid materials management site) consist of agricultural land, including nearby pistachio orchards owned and operated by affiliated entities that would be served by the proposed processing facilities. The FMMP map for the County identifies areas to the north, east and west as prime agricultural land, most of which is planted with pistachio trees. A water pipeline extends from an existing turnout in the Aqueduct along the eastern border of the site. A metered connection will be installed on the pipeline to provide water for the Project. Residential and related commercial land uses are located in Three Rocks, approximately 1.5 miles southeast of the main KAPP processing facilities. An existing electrical power line extends from the Giffen Substation operated by PG&E to the east of the Project area along the north side of Kamm Avenue at the northern border of the site.

Regulatory Setting

Federal Regulations

There are no federal regulations pertinent to local land use and planning.

State of California Regulations

The Cortese-Knox-Herztberg Local Government Reorganization Act

The Cortese-Knox-Herztberg 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-Herztberg Local Government Reorganization Act of 1985. The Act is a policy of the state to encourage orderly growth and development that are essential to the social, fiscal, and economic well-being of the state. The intent of the Act is promote orderly development while balancing competing state interests of

discouraging urban sprawl, preserving open space and prime agricultural lands, and efficiently extending government services. The Act had previously established the County Local Agency Formation Commission (LAFCO), which gave it authority to consider and approve city and special district annexation, dissolution, and formation.

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 ten 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.

Local Regulations

Fresno County General Plan

The Fresno County General Plan is the County's long-range planning document. It consists of seven elements: Economic Development; Agriculture and Land Use; Transportation and Circulation; Public Facilities and Services; Open Space and Conservation; Health and Safety; and Housing. The Agriculture and Land Use Element describes the County's Land Use Diagram and related development standards for unincorporated land within the County and sets out goals, policies, and implementation programs for resource lands (including agriculture), rural development (non-agriculture), urban development, and administration.[1]

The Project site is designated as "Agriculture" in the General Plan, which provides for the production of crops and livestock and for the location of necessary agricultural commercial centers, agricultural processing facilities, and certain non-agricultural activities (see General Plan Table LU-3). General Plan policies that are relevant to the proposed project are discussed below.

Fresno County Zoning Ordinance

[1] Fresno County General Plan. October 2000. Agriculture and Land use Element. https://www.co.fresno.ca.us/home/showdocument?id=18117. Page 2-1. Accessed October 2020.

The Project site is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size). Fresno County Zoning Ordinance Code Section 816.3A identifies value added agricultural uses and facilities as uses permitted subject to approval of a Conditional Use Permit (CUP).

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the project would have a significant impact on land use as follows:

- Physically divide an established community?
- 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?

Impacts and Mitigation Measures

Impact 3.11-1: *Physically divide an established community?*

Less Than Significant. The proposed Project is located in a rural, unincorporated area of the County that lacks any established community. Therefore, no potential impacts associated with the division of an established community would occur. Three Rocks is the nearest established community, a Census-designated place approximately 1.5 miles southeast of the Project site. There is ***no impact.***

Mitigation Measures

None required.

Impact 3.11-2: *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Less Than Significant. The Fresno County General Plan and the Fresno County Zoning Ordinance establish land use policies and regulations that are applicable to the proposed Project. The following discussion evaluates the conformity of the proposed Project to these plans, policies and regulations.

Consistency with Zoning

The County is processing the permit application for the processing facility, including the on-site domestic water treatment facilities, in accordance with the Classified CUP process for value-added agricultural uses and facilities as described in Section 816.3A of the Zoning Code. In addition to the Classified CUP, a height variance for buildings and structures that are taller than the 35-foot height limit in the AQ-20 zoning district has been submitted. A total of 57 structures would require the variance as follows:

- Installation of 49 nut storage silos that are 54′ 4″ tall
- Installation of two "bag houses" that are 67′ tall
- Installation of one cyclone that is 43′ 6″ tall
- Installation of a processing building that is 46′ 8″ tall
- Installation of catwalks, scaffolding and access equipment that are 64′ 7″ tall;

Compliance with the conditions of approval outlined in the CUP will ensure that the proposed Project would not conflict with zoning requirements.

Consistency with the General Plan

The Project parcels are designated Agriculture by the Fresno County General Plan. The AQ-20 Zone District is consistent with this designation. Table 3.11-1 summarizes the proposed Project's consistency with the applicable goals and policies of the General Plan. As demonstrated in the table, the proposed Project would be consistent with all applicable goals and policies of the General Plan aimed at preservation of productive farmland in the County.

Table 3.11-1
General Plan Consistency Analysis

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Agriculture and Land Use Element	**Goal LU-A**	To promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural support services and agriculturally related activities that support the viability of agriculture and further the County's economic development goals.	**Yes:** The Project includes a pistachio processing facility which will support the existing pistachio farming operations in the vicinity by providing a hulling and drying facility near the producing trees.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Agriculture and 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.	**Not Applicable:** The proposed Project does not involve the development of urban uses such as residential or commercial facilities that is traditionally associated with urban growth.
Agriculture and 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 LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria[…]	**Yes:** Tree nut hulling & shelling is considered an Agriculturally-Related and Value-Added Agricultural Use that is a Special Permit Use, according to Table LU-3.
Agriculture and Land Use Element	Policy LU-A.13	The County shall protect agricultural operations from conflicts with non-agricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.	**Not Applicable:** The Project is an agricultural operation and as such, a buffer is not necessary between the Project and the surrounding agricultural uses.
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	**Yes:** Primary access to the project site would be via Kamm Avenue where a scale and guard shack will be located. The entrance road would be 20 to 42 feet wide and constructed to be

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		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.	consistent with facility maintenance requirements and Fresno County Fire Department Standards. These roads would be paved or surfaced with crushed asphalt or another commercially available pervious materials and would provide a fire buffer, accommodate Project operations and maintenance activities, and facilitate on-site circulation for emergency vehicles.
Transportation and Circulation Element	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.	**Yes:** Primary access to the Project site would be via Kamm Avenue where a scale and guard shack will be located. Section 3.17, Transportation and Traffic, determined that no roadway improvements would need to be funded as mitigation, based on analysis from a Traffic Impact Analysis Report provided in Appendix I.
Transportation and Circulation Element	Policy TR-A.8	The County shall ensure that land development that affects roadway use or operation or requires roadway access to plan, dedicate, and construct required improvements consistent with the criteria in the Circulation	**Yes:** Primary access to the Project site would be via Kamm Avenue where a scale and guard shack will be located. The entrance road would be 20 to 42 feet wide and

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		Diagram and Standards section of this element.	constructed to be consistent with facility maintenance requirements and Fresno County Fire Department Standards. These roads would be paved or surfaced with crushed asphalt or another commercially available pervious materials and would provide a fire buffer, accommodate Project operations and maintenance activities, and facilitate on-site circulation for emergency vehicles.
Public Facilities and Services Element	Policy PF-C.3	To reduce demand on the county's groundwater resources, the County shall encourage the use of surface water to the maximum extent feasible.	**Yes:** Project water would be supplied by the Westlands Water District (WWD) from existing conveyance facilities that extend from the California Aqueduct to a pipeline traversing the east side of the Project area. The Project will contract with affiliated growers in the vicinity to obtain sufficient water supplies to operate the processing plant during average, dry and multiple year drought conditions. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			pistachio growers for irrigation.
Public Facilities and Services Element	Policy PF-C.13	In those areas identified as having severe groundwater level declines or limited groundwater availability, the County shall limit development to uses that do not have high water usage or that can be served by a surface water supply.	**Yes**: The site overlies the Westside Groundwater Subbasin, which covers more than 640,000 acres and is located within the San Joaquin Valley Groundwater Basin. This subbasin is a source of water for hundreds of farming operations in Fresno and Kings counties and is currently considered to be in an overdraft situation as a result of the following: 1) the ongoing drought in California; and 2) historic withdrawals exceeding recharge capacity. The Project will purchase water from the contracting growers to meet demand, and WWD will supply the water in accordance with an approved municipal and industrial (M&I) account for the Project. No groundwater will be used for Project purposes.
Public Facilities and Services Element	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:	**Yes:** Section 3.10, Hydrology, evaluated water supply and the supporting Water Supply Assessment is provided in Appendix G. The Project will purchase water from

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		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 would 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	the contracting growers to meet demand, and WWD will supply the water in accordance with an approved municipal and industrial (M&I) account for the Project. Project total water demand is estimated to be 209 acre-feet per year and it is expected that the Project will recover from 167 to 188 acre-feet per year of irrigation reuse water which will be conveyed from the settling ponds to the regional irrigation distribution system for irrigation reuse by growers.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		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 so 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.	
Public Facilities and Services Element	Policy PF-E.7	The County shall require new development to pay its fair share of the costs of Fresno County storm drainage and flood control improvements within unincorporated areas.	**Not Applicable:** all stormwater and incidental runoff within the main plant area will be directed to an on-site unlined detention basin near the northeastern site border.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
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.	**Yes:** Construction, operation and maintenance of the proposed Project would result in very little change to the existing drainage pattern of the area. The site topography is relatively flat (the existing ground slope is generally less than 0.5%) and all run-off will be retained on-site and directed to an unlined detention basin.
Public Facilities and Services Element	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.	**Yes:** The Applicant shall prepare a SWPPP. The SWPPP would include measures to ensure that all pollutants and their sources are controlled, and non-stormwater discharges are identified and either eliminated, controlled, or treated. The SWPPP would ensure that site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges. Lastly, post-construction, the SWPPP would require BMPs be completed and maintained as necessary during operations to reduce or eliminate

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			pollutants.
Public Facilities and Services Element	Policy PF-F.1	The County shall continue to promote maximum use of solid waste source reduction, reuse, recycling, composting, and environmentally-safe transformation of wastes.	**Yes:** The proposed Project would be required to comply with the County's Construction and Demolition Debris Recycling Program through implementation of Reclamation Plans. A construction waste recycling program would be implemented with the objective of recycling at least 65% of the project waste (by weight), pursuant to the California Green Building Standards Code.
Public Facilities and Services Element	Policy PF-F.4	The County shall ensure that all new development complies with applicable provisions of the County's Integrated Waste Management Plan.	**Yes:** The proposed Project would generate solid waste during construction, operation and maintenance, and decommissioning activities. All handling and processing of construction, demolition, and inert debris would be in accordance with applicable regulatory requirements. The Applicant would be required to complete a three-step process to meet the County's Construction and Demolition Recycling

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			Program requirements. The first step would be to complete and submit a Waste Management Plan for recycling a minimum of 65% of all nonhazardous waste, scrap, and debris from construction. The second step would be to collect data during construction in a waste log that documents all weight/gate tags and receipts and invoices for disposal services. The third step would be to complete acknowledgement forms and provide the waste log and all supporting documentation 14 days prior to final inspection.
Public Facilities and Services Element	Policy PF-G.2	The County shall strive to maintain a staffing ratio of two (2) sworn officers serving unincorporated residents per 1,000 residents served. (This count of officers includes all ranks of deputy sheriff personnel and excludes all support positions and all sworn officers serving county wide population interests such as bailiffs, and sworn officers serving contract cities, and grant specific populations).	**Not Applicable:** The proposed Project would not conflict with the County's ability to meet the desired staffing ratio; the project would not result in new residents who could contribute to the demand for police services.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Public Facilities and Services Element	Policy PF-H.5	The County shall require that new development be designed to maximize safety and minimize fire hazard risks to life and property.	**Yes:** Section 3.9, Hazards and Hazardous Materials, includes an evaluation of potential fire hazards. The Project is not located in a zone of high or very high fire severity hazard as defined by CAL FIRE. The Project would also coordinate with the California Office of the State Fire Marshall and the Fresno County Fire Department to provide training for personnel to minimize fire risk, properly manage combustible vegetation or agricultural products on and around the Project site, and discuss emergency responses and routes. Fire-suppression equipment (e.g., fire extinguishers) would be made available on the Project site at all times. All heavy equipment would be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.
Public Facilities and Services Element	Policy PF-H.10	The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by	**Yes:** The Project would coordinate with the California Office of the State Fire Marshall and

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		responsible local fire agencies per the Uniform Fire Code and other State and local ordinances.	the Fresno County Fire Department to provide training for personnel to minimize fire risk, properly manage combustible vegetation or agricultural products on and around the Project site, and discuss emergency responses and routes. Fire-suppression equipment (e.g., fire extinguishers) would be made available on the Project site at all times. All heavy equipment would be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.
Open Space and Conservation Element	Policy OS-A.25	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.	**Yes:** Section 3.7, Geology and Soils, includes an evaluation of potential erosion-related impacts and associated mitigation. The proposed Project would be constructed to follow the existing topography of the project site as much as possible to limit erosion potential and maintain existing drainage patterns.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Open Space and Conservation Element	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.	**Yes:** Section 3.3, Air Quality, discusses potential impacts on air quality from construction and operation of the proposed project. As evaluated in Section 3.3, Project construction and Project operations would not exceed emission thresholds.
Open Space and Conservation Element	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.	**Yes:** Section 3.3, Air Quality, discusses potential impacts to sensitive receptors and an Air Quality Analysis has been prepared and included in Appendix A. The proposed Project would not exceed emissions screening thresholds for localized criterial pollutant impacts.
Open Space and Conservation Element	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 of less than ten (10) microns (PM10) regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.	**Yes:** Construction of the proposed Project would incorporate fugitive dust control measures, including a dust control plan, to reduce PM10 emissions, in accordance with SJVAPCD Regulation VIII.
Open Space and Conservation Element	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	**Yes:** All access roads would be aggregate base on a compacted subgrade. Dust control measures, including

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		particulate emissions and are appropriate to the scale and intensity of use.	watering, stabilizing disturbed soils, and limiting traffic speeds, would be implemented during construction and operation. Refer to Section 3.3, Air Quality.
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, archeological, 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 archeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.	**Yes:** According to the cultural resources report for the Project, there are no known cultural, historical, archaeological or paleontological resources on the Project site. Section 3.5, Cultural Resources contains Mitigation Measures should an unknown resource be encountered during construction.
Open Space and Conservation Element	Policy OS-J.2	The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the locations of archeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.	**Yes:** Section 3.5, Cultural Resources summarizes that no known archaeological resources are within the project's area of direct impact. Section 3.5, Cultural Resources contains Mitigation Measures should an unknown resource be encountered during construction, including provisions to

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			maintain confidentiality regarding the location of such finds.
Open Space and Conservation Element	Policy OS-J.9	In approving new development, the County shall ensure, to the maximum extent practicable, that the location, siting, and design of any project be subordinate to significant geologic resources.	**Yes:** The proposed Project would be located on lands currently fallow. As discussed in Section 3.5, Cultural Resources, significant geologic resources are not present on the site.
Open Space and Conservation Element	**Goal OS-K**	To conserve, protect, and maintain the scenic quality of Fresno County and discourage development that degrades areas of scenic quality.	**Yes:** The area is not located in a scenic area as designated by the County. Nevertheless, the proposed Project would alter the existing visual characteristic of the site. Section 3.1, Aesthetics, determined that the project would not substantially degrade the existing visual character and quality of the site and surrounding areas.
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 may include encouraging private property owners to enter into open space easements for designated scenic areas	**Yes:** The Project is not located adjacent to a scenic area, vista, or roadways. A segment of I-5 that passes within 20 miles to the west of the proposed Project is a County-designated scenic roadway; however, the proposed Project would not be visible from I-5 due to distance

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Open Space and Conservation Element	**Goal OS-L**	To conserve, protect, and maintain the scenic quality of land and landscape adjacent to scenic roads in the County.	**Not Applicable**: The Project is not located adjacent to a scenic area, vista, or roadways.
Health and Safety Element	Policy HS-B.1	The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.	**Yes:** The Project would coordinate with the California Office of the State Fire Marshall and the Fresno County Fire Department to provide training for personnel to minimize fire risk, properly manage combustible vegetation or agricultural products on and around the Project site, and discuss emergency responses and routes. Fire-suppression equipment (e.g., fire extinguishers) would be made available on the Project site at all times. All heavy equipment would be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.
Health and Safety Element	Policy HS-B.5	The County shall require development to have adequate access for fire and emergency vehicles and equipment. […]	**Yes:** The Project site would be accessible to emergency vehicles. The roads providing access to the site would be sufficient for CAL FIRE

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
			access.
Health and Safety Element	Policy HS-C.8	During the building permit review process, the County shall ensure project compliance with applicable Federal Emergency Management Agency (FEMA) standards pertaining to residential and non-residential development in the floodplain, floodway, or floodway fringe.	**Yes:** Portions of the southern boundary of the Project site lie within a Special Flood Hazard Zone "A" which defines areas that are subject to inundation by the 100-year flood. The processing plant will be constructed on land not within the 100-year flood zone.
Health and Safety Element	Policy HS-D.3	**Consistent.** Consistent with the County's policies, a design-level geotechnical report will be prepared as a condition of approval prior to issuance of grading permits. The design-level geotechnical report will be prepared in conformance with California Building Code and Fresno County's Grading Permit that require design to address any	**Yes:** Consistent with the County's policies, a design-level geotechnical report has been prepared and is provided as Appendix E.
Health and Safety Element	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 CCR) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety.	**Yes:** Consistent with the County's policies, a design-level geotechnical report has been prepared and is provided as Appendix E. The design-level geotechnical report has been prepared in conformance with California Building Code and Fresno County's Grading Permit that require design to address any potential geologic or seismic hazards.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Health and Safety Element	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 California Code of Resources have been satisfied.	**Yes:** While the Project site is not within a mapped Seismic Hazard Zone, the site may be subject to strong earthquake-related ground shaking at some point during the lifetime of the facility due to the potential for relatively large earthquakes to the south and west of the Project site. The proposed Project will be constructed in compliance with the geotechnical and seismic design criteria required for construction in accordance with the California Building Code.
Health and Safety Element	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.	**Yes:** The evaluation of soil characteristics and properties was based on the Geotech analysis provided in Appendix E. Site soil samples were analyzed and it was determined that the near surface soils have a medium expansion potential. Recommendations have been included to reduce potential of cracking due to expansive soils effect on the concrete slab.
Health and Safety Element	Policy HS-D.9	The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable	**Yes:** The proposed Project would comply with a Construction General

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		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.	Permit, and implementation of a SWPPP would limit the impact of construction-related soil erosion by enacting BMPs to address sediment control and limit erosion, such as installation of silt fencing and implementation of temporary sediment disposal measures. The Fresno County Grading Ordinance stipulates safety and environmental control measures for construction practices. A Fresno County building official would conduct inspections of erosion control measures during construction. Operation of the proposed Project would not include activities that are likely to cause erosion.
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.	**Yes:** The use, storage, transport, and disposal of hazardous materials in connection with the proposed Project would be carried out in accordance with federal, state, and local regulations.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
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.	**Yes:** An Environmental Noise Assessment has been prepared and is provided in Appendix H. The analysis determined that the Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
Health and Safety Element	Policy HS-G.4	So that noise mitigation may be considered in the design of new projects, the County shall require an acoustical analysis as part of the environmental review process where: a. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels that are "generally unacceptable" or higher according to the Chart HS-1: "Land Use Compatibility for Community Noise Environments; b. Proposed projects are likely to produce noise levels exceeding the levels shown in the County's Noise Control Ordinance at existing or planned noise-sensitive uses.	**Yes:** An Environmental Noise Assessment has been prepared and is provided in Appendix H. The analysis determined that the Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
Health and Safety Element	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.	**Yes:** Short-term construction noise will be consistent with the County's noise policies and standards because activities would occur between the hours of 6:00 AM and 9:00 PM on weekdays, and 7:00 AM and 9:00 PM on Saturdays and Sundays.
Health and Safety Element	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."	**Yes:** The Environmental Noise Assessment prepared for the project, and as summarized in Section 3.13, Noise, determined that construction, operation of the proposed project would result in less-than-significant impacts with mitigation with respect to noise levels in excess of standards and would be consistent with Chart HS-1 "Land Use Compatibility for Community Noise Environments".

The proposed Project is an appropriate use for the site, and as demonstrated in Table 3.11-1, the Project will be consistent with the applicable objectives, goals and policies outlined in the Fresno County General Plan. Implementation of these policies and measures will ensure that impacts remain ***less than significant.***

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The geographic area of this cumulative analysis is Fresno County. As discussed above, the Project does not divide an existing community and does not conflict with any applicable land use regulations. As such, the Project will not result in project-specific impacts and therefore, the proposed Project's incremental contribution would be ***less than cumulatively considerable.***

3.12 Mineral Resources

This section of the DEIR describes impacts on County mineral resources associated with proposed Project development. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the County. Extracted resources include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone).[1] The Kings River is a principal sand and gravel producing location; however, aggregate and petroleum are considered Fresno County's most significant extractive mineral resources.[2]

The only known mineral resource in the proposed Project area has been sand and gravel mining southwest of the State Route 33 and Interstate 5 intersection, over six miles southwest of the site.[3]

Regulatory Setting

<u>State of California Regulations</u>

Mineral Resource Zones

Sections 2761(a) and (b) and 2790 of the Surface Mining and Reclamation Act (SMARA) provide for a mineral lands inventory process termed classification-designation. The California Division of Mines and Geology, and the State Mining and Geology Board are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies, such as cities and counties, with information on the location, need, and importance of minerals within their respective jurisdictions. It is also the intent of this process, through the adoption of Draft General Plan mineral resource management policies, that this information be considered in future local land-use planning decisions. Areas are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four MRZs. Of the four categories, lands classified as MRZ-2 are of the greatest importance because they identify significant mineral deposits of a particular commodity. MRZ-3 areas are also of interest because they identify areas that may contain additional resources of economic

[1] Fresno County General Plan Update EIR. February 2002. Page 4.11-1.
[2] Fresno County General Plan Update Background Report. October 2000. Figure 7-8 and page 7-64.
[3] Ibid. Figure 7-7.

importance. Areas designated by the Mining and Geology Board as "regionally significant" are incorporated by regulation into Title 14, Division 2 of the California Code of Regulations. Such designations require that a lead agency' s land use decisions involving designated areas are made in accordance with its mineral resource management policies, and that they consider the importance of the mineral resource to the region or the state as a whole and not just the lead agency' s jurisdiction.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Appendix G Checklist:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Impacts and Mitigation Measures

Impact 3.12-1: *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. As described in the Environmental Setting, there are no known mineral resources within the proposed Project area and as such, no loss of availability to known mineral resources would occur as a result of proposed Project development. There would be ***no impact.***

Mitigation Measures

None are required.

Cumulative Impacts

No Cumulative Impact. The scope for considering cumulative impacts to mineral resources is generally site-specific rather than cumulative in nature because each project site has different mineral-related considerations that would be subject to review. As discussed above, there are no known mineral resources within the proposed Project area and as such, Project development would not cumulatively impact any known mineral resources. There is ***no cumulatively considerable impact***.

3.13 Noise

This section evaluates the potential for noise and groundborne vibration impacts resulting from implementation of the proposed Project. This includes the potential for the proposed Project to result in impacts associated with a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the Project site; exposure of people in the vicinity of the Project site to excessive noise levels, groundborne vibration, or groundborne noise levels; and whether this exposure is in excess of standards established in the local general plan or noise ordinance. The data utilized for analysis of this section is based, in part, on the Environmental Noise Assessment prepared for this Project by WJV Acoustics (Appendix H). No NOP comments were received pertaining to noise.

Fundamentals of Sound and Environmental Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Table 3.13-1, Representative Environmental Noise Levels, illustrates representative noise levels in the environment.

Table 3.13-1
Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: California Department of Transportation, Technical Noise Supplement, October 1998.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq} – An L_{eq}, or equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- L_{max} – The maximum instantaneous noise level experienced during a given period of time.

- L_{min} – The minimum instantaneous noise level experienced during a given period of time.

- L_{dn} – The Day-Night Average Level, is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity

in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

- CNEL – The Community Noise Equivalent Level is a 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 P.M. to 10:00 P.M. and a 10 dBA "weighting" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.7 dBA CNEL.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

Under controlled conditions, in an acoustics laboratory, the trained (enhanced listening abilities) healthy human ear is able to discern changes in sound levels of 1 dBA, when exposed to steady, single frequency "pure tone" signals in the mid-frequency range. Outside of such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise. It is widely accepted that in the community noise environment the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors, such as the weather and reflecting or barriers, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is normal earth or has vegetation,

including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The normal noise attenuation within residential structures with open windows is about 17 dBA, while the noise attenuation with closed windows is about 25 dBA.[1]

Fundamentals of Environmental Groundborne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby, creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in decibels (VdB) is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 3.13-2, Human Response to Different Levels of Groundborne Vibration.

[1] National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers, 1971.

Table 3.13-2
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.	

Environmental Setting

Study Area

The Project would be located on approximately 315.8 acres to the south of Kamm Avenue, west of Highway 33, and east of Interstate 5 (I-5) in the western portion of unincorporated Fresno County. The Project site generally consists of undeveloped agricultural land, surrounded by agricultural land uses.

Sensitive receptors located in the Project vicinity include the residential community of Three Rocks, located west of State Route 33 (Derreck Avenue), south of Kamm Avenue. Three Rocks is located approximately 1.25 miles southeast of the Project site, and approximately 2 miles from the main processing area. There are additional residential land uses located along the northern side of Kamm Avenue, approximately 1.25 miles northwest of the Project site. These residential land uses are owned by the Project Applicant and are used for employee housing purposes.

Regulatory Setting

Federal Regulations

Noise Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed Project. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise.

Vibration Standards

The Federal Transit Administration (FTA) has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in Table 3.13-3, Construction Vibration Damage Criteria.

Table 3.13-3
Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.	

In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: (1) Vibration Category 1 – High Sensitivity, (2) Vibration Category 2 – Residential, and (3) Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Under conditions where there are an infrequent number of events per day[2], the FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.

[2] The Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) defines "Infrequent Events" as "fewer than 30 vibration events of the same kind per day." Page 8-3. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed October 2020.

Under conditions where there are an occasional number of events per day[3], the FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings. No thresholds have been adopted or recommended for commercial, office, and industrial uses.

State of California Regulations

California State Building Code

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room.

Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local Regulations

Fresno County General Plan

Goal HS-G: 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.

[3] The Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) defines "Occasional Events" as "between 30 and 70 vibration events of the same source per day." Page 8-3. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed October 2020.

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the Project would have a significant impact on noise if it would cause any of the following conditions to occur:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Generation of excessive groundborne vibration or groundborne noise levels?
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

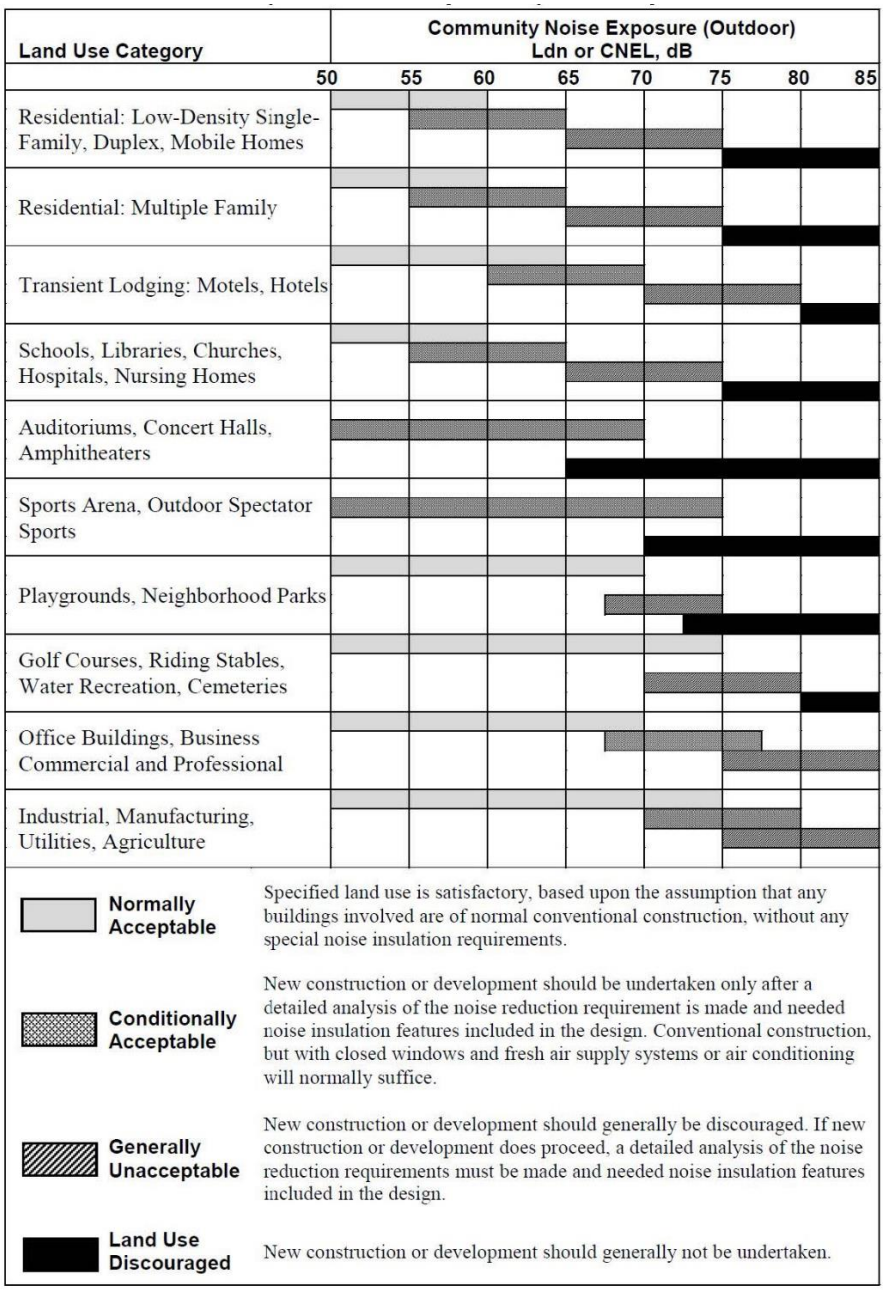
CEQA does not define what constitutes a substantial increase in noise levels. Some guidance is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of the DNL (or CNEL). Annoyance is a summary measure of the general adverse reaction of people to noise that results in speech interference, sleep disturbance, or interference with other daily activities.

<u>Fresno County General Plan</u>

The Fresno County Noise Element of the General Plan establishes noise level criteria in terms of the Day-Night Average Level (L_{dn}/DNL) metric. The L_{dn} is the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). Table HS-1 (provided below as Table 3.13-4) of the Fresno County General Plan provides the maximum allowable exterior noise exposure levels for various land use types. For residential land uses, the noise level standards typically apply to outdoor activity areas. Outdoor activity areas generally include backyards of single-family residences and individual patios or decks and outdoor common use areas of multi-family residential developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation.

Although not expressly stated in the noise element, WJVA has assumed that the County also requires that interior noise levels attributable to exterior noise sources not exceed 45 dB L_{dn}. An interior noise level standard of 45 dB L_{dn} is consistent with earlier versions of the County's noise element, the HUD noise standards and the California Noise Insulation Standards. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

Table 3.13-4
Fresno County Land Use Compatibility Noise Exposure



Fresno County Ordinance Code

Chapter 8.40 of the Fresno County Ordinance Code (noise ordinance) applies to noise sources that are not pre-empted from local control by existing state or federal regulations. Pre-empted noise sources include traffic on public roadways, railroad operations and aircraft in flight.

The noise ordinance addresses the statistical distribution of noise over time and allows for progressively shorter periods of exposure to levels of increasing loudness. Table 3.13-5 summarizes the exterior noise level standards of the ordinance. The standards are to be adjusted by -5 dB if the noise source of concern consists primarily of speech or music. The ordinance is to be applied during any one-hour time period of the day or night and the standards are 5 dB more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. The standards of the noise ordinance may be adjusted upward (made less restrictive) if existing ambient noise levels without the source of concern already exceed the noise ordinance standards.

Table 3.13-5
Exterior Noise Level Standards, DBA
Fresno County Noise Ordinance[4]

Category	Cumulative # Min/Hr. (L_n)[1]	Daytime (7 AM – 10 PM)	Nighttime (10 PM to 7 AM)
1	30 (L_{50})	50(45)[2]	45(40)[2]
2	15 (L_{25})	55(50)[2]	50(45)[2]
3	5 ($L_{8.3}$)	60(55)[2]	55(50)[2]
4	1 ($L_{1.7}$)	65(60)[2]	60(55)[2]
5	0 (L_{max})	70(65)[2]	65(60)[2]

Notes:

[1]In layman's terms, the noise level standards shown may not be exceeded for more than the specified number of minutes within any one-hour time period. The L_n value shown in parenthesis indicates the percent of the time during an hour that a particular noise level may not be exceeded. For example, the L_{50} represents 50% of the hour, or 30 minutes.

[2]Adjusted standard for a noise source consisting primarily of speech or music.

[4] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

Construction Noise and Vibration

Section 8.40.060(c) of the Fresno County Ordinance Code (Noise Source Exemptions) states that noise associated with construction activities would be exempt from the noise standards provided above in Table 3.13-5, 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.

There are no Fresno County Vibration level standards. Some guidance is provided by the Caltrans Transportation and Construction Vibration Guidance Manual. The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided below in Table 3.13-6 and Table 3.13-7, and are presented in terms of peak particle velocity (PPV) in inches per second (in/sec).

Table 3.13-6
Guideline Vibration Annoyance Potential Criteria[5]

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.1
Severe	2.0	0.4

Table 3.13-7
Guideline Vibration Damage Potential Threshold Criteria[6]

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile, historic buildings, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1

[5] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.
[6] Ibid.

Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Impacts and Mitigation Measures

Impact 3.13-1: *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Existing ambient noise levels in the Project vicinity are dominated by traffic noise along Kamm Avenue and State Route 33 (SR 33). Additional sources of noise observed during site inspection included noise associated with agricultural activities, aircraft overflights, birds, barking dogs and roosters.

Measurements of existing ambient noise levels in the Project vicinity were conducted on August 6 and August 7, 2020. Long-term (24-hour) ambient noise level measurements were conducted at two (2) locations (sites LT-1 and LT-2) as shown in Figure 3.13-1. One long-term ambient noise measurement site was located in the vicinity of existing residential land uses near the community of Three Rocks (LT-1), and was exposed to traffic noise associated with SR 33 as well as noise associated with agricultural activities and residential activities (including roosters and dogs). The location of LT-1 was selected as a long-term noise monitoring site as it represents noise-sensitive receptors (residential land uses) in the vicinity of the Project site.

A second long-term ambient noise monitoring site (LT-2) was located in the vicinity of existing residential land uses on the property of the Project Applicant. The residences are used as employee housing and are located on the north side of Kamm Avenue. The location of LT-2 was selected as a long-term noise monitoring site as it represents noise-sensitive receptors (residential land uses) in the vicinity of the Project site.

Additionally, short-term (15-minute) ambient noise level measurements were conducted at four (4) locations (Sites ST-1 through ST-4). The Project vicinity and locations of the noise monitoring sites are shown on Figure 3.13-1. Two (2) individual measurements were taken at each of the four short-term sites to quantify ambient noise levels in the morning and afternoon hours.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzers equipped with B&K Type 4176 1/2" microphones. The equipment complies with the

specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meters were calibrated with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements.

Measured hourly energy average noise levels (L_{eq}) at site LT-1 ranged from a low of 41.7 dB between 2:00 p.m. and 3:00 p.m. to a high of 57.1 dB between noon and 1:00 p.m. Hourly maximum (L_{max}) noise levels at site LT-1 ranged from 54.5 to 80.2 dB. Residual noise levels at the monitoring site, as defined by the L_{90} statistical descriptor ranged from 35.1 to 42.9 dB. The L_{90} is a statistical descriptor that defines the noise level exceeded 90% of the time during each hour of the sample period. The L_{90} is generally considered to represent the residual (or background) noise level in the absence of identifiable single noise events from traffic, aircraft and other local noise sources. The measured L_{dn} value at site LT-1 during the 24-hour noise measurement period was 52.2 dB L_{dn}.

Measured hourly energy average noise levels (L_{eq}) at site LT-2 ranged from a low of 50.6 dB between 5:00 p.m. and 6:00 p.m. to a high of 60.5 dBA between noon and 1:00 p.m. Hourly maximum (L_{max}) noise levels at site LT-2 ranged from 71.6 to 84.3 dB. Residual noise levels at the monitoring site, as defined by the L_{90}, ranged from 28.3 to 39.8 dB. The measured L_{dn} value at site LT-2 during the 24-hour noise measurement period was 61.6 dB L_{dn}.

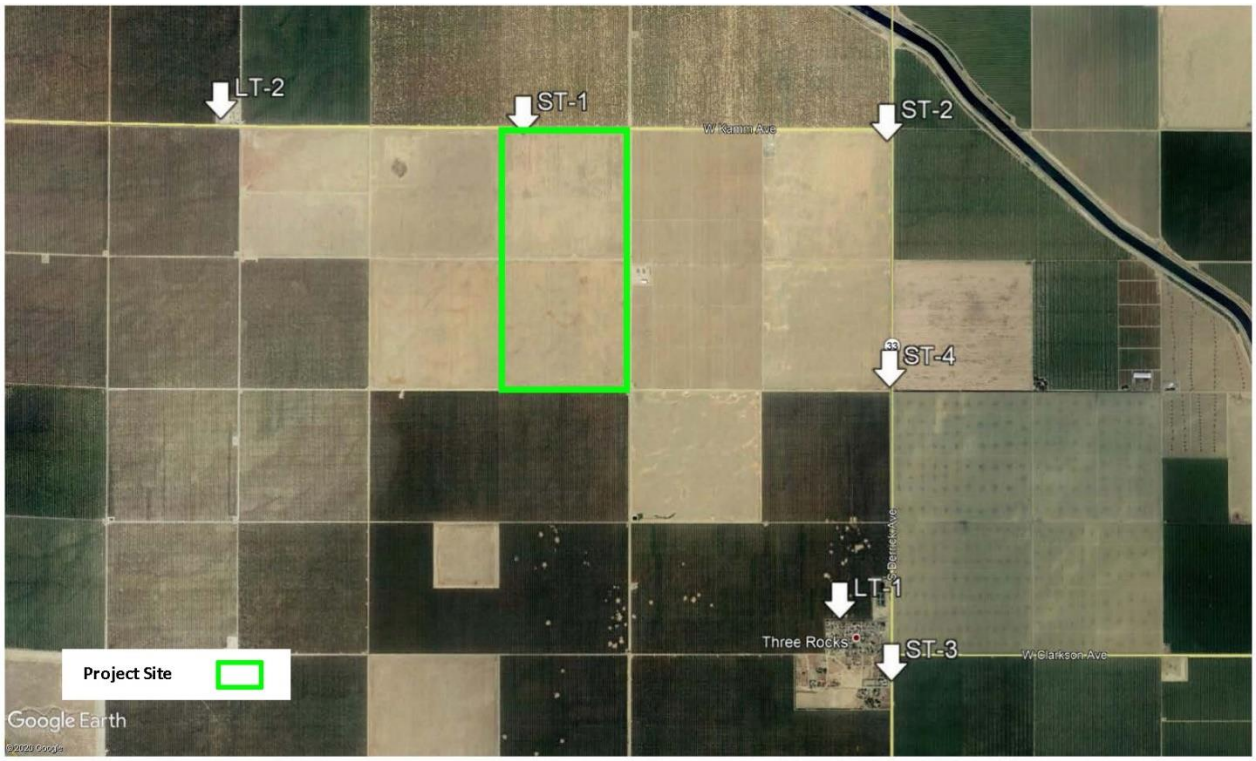
Table 3.13-8 provides the measured L_{50} noise levels at the two measurement sites for the 24-hour measurement period. The L_{50} is a statistical descriptor that defines the noise level exceeded 50% of the time during each hour of the sample period. The L_{50} statistical descriptor represents the most restrictive of the County's noise level standards and will therefore be used to demonstrate Project compliance with the County's applicable noise level standards.

Table 3.13-8
Summary of 24-Hour Noise Level Measurements, dB L_{50}[7]

Time	A-Weighted Decibels, dBA L_{50}	
	LT-1	LT-2
12:00 AM	37.0	35.6
1:00 AM	36.9	35.1
2:00 AM	37.0	35.1
3:00 AM	41.3	35.9
4:00 AM	44.1	34.8
5:00 AM	47.2	40.9
6:00 AM	45.8	43.9
7:00 AM	42.4	42.3
8:00 AM	42.4	42.2
9:00 AM	43.2	42.1
10:00 AM	41.8	39.3
11:00 AM	39.8	39.7
12:00 PM	42.4	45.6
1:00 PM	42.3	43.4
2:00 PM	39.8	42.6
3:00 PM	40.1	39.0
4:00 PM	42.6	36.8
5:00 PM	42.3	38.5
6:00 PM	44.3	40.1
7:00 PM	43.1	37.3
8:00 PM	44.0	37.3
9:00 PM	39.0	38.7
10:00 PM	37.9	32.6
11:00 PM	39.2	37.6

[7] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

Figure 3.13-1
Project Vicinity and Ambient Noise Monitoring Sites



The short-term site noise measurement data included energy average (L_{eq}) maximum (L_{max}) as well as five (5) individual statistical parameters. Observations were made of the dominant noise sources affecting the measurements. The statistical parameters describe the percent of time a noise level was exceeded during the measurement period. Table 3.13-9 summarizes short-term noise measurement results.

Table 3.13-9
Summary of Short-Term Noise Measurement Data[8]

Site	Time	A-Weighted Decibels, dBA							Sources
		L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}	L_{90}	
ST-1	8:15 AM	61.7	80.6	74.0	59.2	46.1	39.0	28.9	TR
ST-1	2:45 PM	62.4	83.7	75.1	63.4	48.1	42.6	31.4	TR
ST-2	8:35 AM	68.8	83.6	79.5	74.7	63.5	54.8	46.7	TR,AC

[8] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

ST-2	3:05 PM	66.6	79.5	73.0	71.2	64.7	55.5	43.2	TR
ST-3	9:00 AM	69.4	82.0	80.1	74.2	65.7	62.9	61.1	TR, AG
ST-3	3:30 PM	67.4	78.8	75.8	72.1	63.2	61.4	58.3	TR
ST-4	9:20 AM	67.6	81.9	78.5	73.5	60.2	50.3	34.9	TR, AG
ST-4	3:50 PM	64.2	80.1	77.7	71.0	61.8	52.4	36.1	TR, AC
TR: Traffic, AC: Aircraft, AG: Agricultural Activities									

Short-term noise measurements were conducted for 15-minute periods. Site ST-1 was located south of Kamm Avenue, in the vicinity of the Project site, ST-2 was located at the southwest corner of Kamm Avenue and SR 33. Site ST-3 was located along the west side of SR 33 in the vicinity of the community of Three Rocks. Site ST-4 was located along the west side of SR 33 approximately halfway between the community of Three Rocks and Kamm Avenue. The dominant source of noise at all four short-term measurement sites was vehicle traffic along Kamm Avenue and/or SR 33. Additional sources of noise included small aircraft overflights, military aircraft overflights and noise associated with agricultural activities.

Construction Noise Impacts

Less Than Significant With Mitigation. Construction noise could occur at various locations within and near the Project site through the build-out period. The distance from the closest noise-sensitive receiver to the Project site is approximately 7,000 feet from the source.

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time. Most residents recognize this reality and expect to hear construction activities on occasion.

Table 3.13-10 provides typical construction-related noise levels at distances of 50 feet, 100 feet, and 300 feet. As a point of reference, the loudest equipment provided on Table 3.13-10 (concrete saw) would be less than 45 dB at a distance of 7,000 feet from the source and would be inaudible above existing ambient noise levels.

Table 3.13-10
Typical Construction Equipment[9]

Type of Equipment	50 Ft.	100 Ft.	300 Ft.
Backhoe	78	72	62
Concrete Saw	90	84	74
Excavator	81	75	65
Front End Loader	79	73	63
Jackhammer	89	83	73
Paver	77	71	61
Pneumatic Tools	85	79	69
Dozer	82	76	66
Rollers	80	74	64
Scrapers	87	81	71
Portable Generators	80	74	64
Front Loader	86	80	70
Backhoe	86	80	70
Excavator	86	80	70
Grader	86	80	70

Construction noise is typically not considered to be a significant impact if construction is limited to the daytime hours and construction equipment is adequately maintained and muffled. Extraordinary noise-producing activities (e.g., pile driving) are not anticipated. The County Code of Ordinances typically restricts hours of construction activity to occur between the hours of 6:00 a.m. to 9:00 p.m. Monday through Friday and between 7:00 a.m. to 5:00 p.m. Saturday and Sunday. However, it should be noted that due to the distances between the Project site and the closest sensitive receiver locations, noise associated with construction activities would not be expected to exceed any noise level standard or exceed existing ambient noise levels at any hour of the day, if construction activities were to occur outside of the typically permitted hours of construction. Although there are no significant impacts anticipated from construction noise, mitigation measures shall be applied in order to minimize construction noise impacts (Mitigation Measure NOI-1). With implementation of mitigation, the impact from construction noise remains ***less than significant.***

Long-Term Operational Traffic Noise Impacts

Less Than Significant. WJVA utilized the FHWA Traffic Noise Model4 to quantify expected Project-related increases in traffic noise exposure at representative noise-sensitive receptor

[9] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

locations in the Project vicinity. Traffic noise exposure levels for Existing, Existing Plus Project, 2040 No Project and 2040 Plus Project traffic conditions were calculated based upon the FHWA Model and traffic volumes provided by JLB Traffic Engineering, Inc. (See Section 3.17 – Transportation for traffic volume information) The day/night distribution of traffic and the percentages of trucks on the roadways used for modeling were also obtained from JLB Traffic Engineering, Inc. The Noise modeling assumptions used to calculate Project traffic noise are provided as Appendix C to Appendix H.

Project-related significant impacts would occur if an increase in traffic noise associated with the Project would result in noise levels exceeding the County's applicable noise level standards at the location(s) of sensitive receptors. For the purpose of this analysis a significant impact is also assumed to occur if traffic noise levels were to increase by 3 dB at sensitive receptor locations where noise levels already exceed the County's applicable noise level standards (without the Project), as 3 dB generally represents the threshold of perception in change for the human ear. This analysis of Project traffic noise focuses on residential land uses, as they represent the most restrictive noise level criteria by land use type provided in the General Plan. The County's exterior noise level standard for residential land uses is 60 dB L_{dn}. The locations of the modeled traffic noise receptors are provided as Figure 3.13-2.

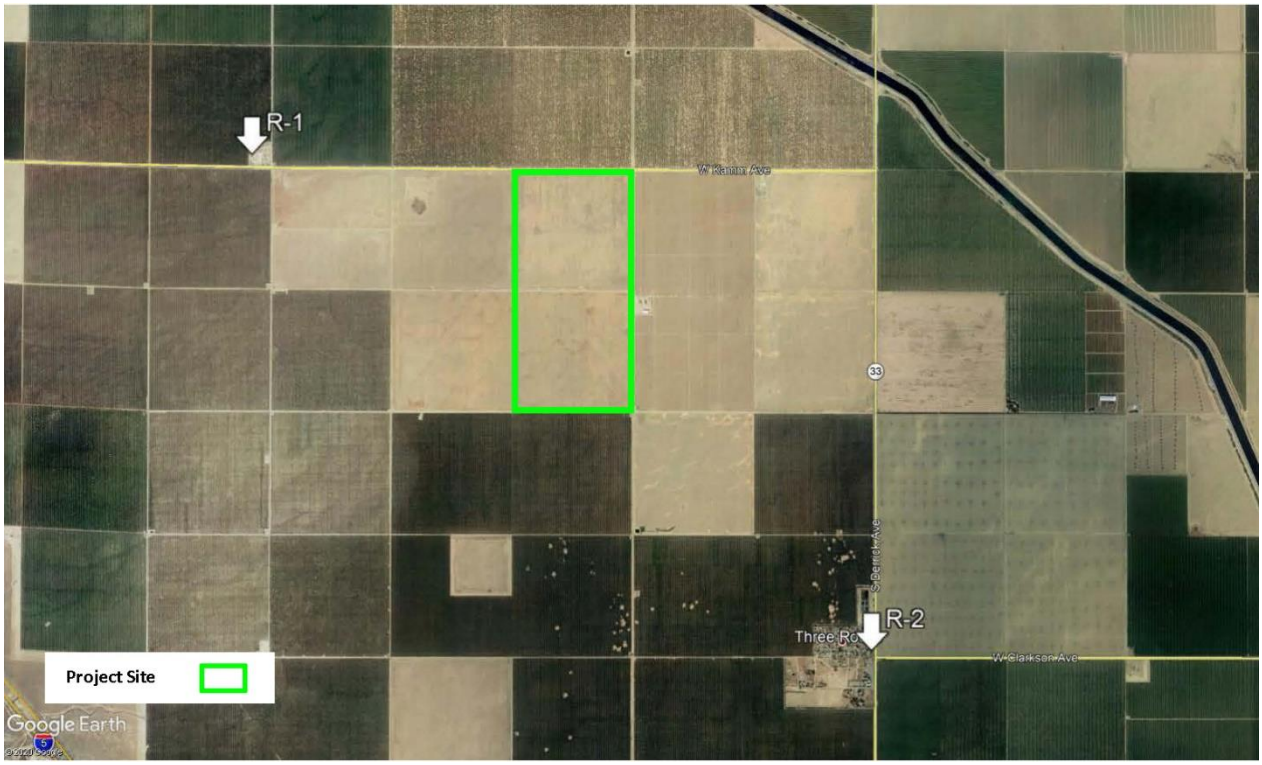
Table 3.13-11 provides a comparison of traffic noise levels at the two modeled receptor locations for Existing, Existing Plus Project, 2040 and 2040 Plus Project traffic conditions. As described in Table 3.13-11, Project-related traffic is not expected to result in noise levels at any sensitive receptors to exceed the County's noise level standard (R-1), or result in an increase of 3 dB at any sensitive receptor locations where noise levels already exceed the County's noise level standard without the implementation of the Project (R-2). Therefore, Project-related increases in traffic noise exposure are considered to be ***less than significant.***

Table 3.13-11
Project-Related Increases in Traffic Noise, dB, CNEL[10]

Model Receptor	Existing	Existing Plus Project	2040 No Project	2040 Plus Project	Change (Max)	Significant Impact?
R-1	52	54	53	56	3	No
R-2	67	68	69	69	1	No

[10] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

Figure 3.13-2
Locations of Modeled Traffic Noise Receptors



Noise Impacts From On-Site Noise Sources

Less Than Significant With Mitigation. The Project would operate year-round to package and process harvested pistachios for retail and wholesale customers. During an approximately 6-week harvest period, which typically occurs during August to October, the Project will operate seven days a week and 24 hours per day to receive, hull, heat, dry and store pistachio crops in onsite storage silos.

Dryer Units

The dominant on-site noise-producing component of the pistachio plant are the grain dryer units used to dry and process the freshly harvest nuts. The Project would include fourteen (14) GSI 2426X grain dryer units. In order to assess potential noise levels associated with the use of these grain dryer units, WJVA staff conducted reference noise level measurements of the same GSI 2426X units, while in use, at an existing pistachio processing facility located in Terra Bella, California on September 2, 2020. Noise measurement equipment used was the same as described above.

Noise level measurements indicated that the GSI 2426X grain dryer produced noise levels of approximately 96 dB at a distance of approximately fifteen (15) feet directly in from the unit (facing directly toward the fan). This represents the loudest portion of the unit. WJVA also conducted noise level measurements at a 90-degree side angle of the unit, where noise was measured to be approximately 93 dB at t distance of approximately fifteen feet from the unit.

Additional observed sources of noise associated with the Terra Bella facility included conveyor belts, fork lift and truck movements and human voices. WJVA staff conducted reference noise level measurements at two (2) additional locations at distances outside of the main processing area.

Both locations were located approximately 400 feet from the main processing area. These two reference noise measurement sites (TB-1 and TB-2). Measurement location TB-1 was located approximately 400 feet west of the main processing area, and was partially acoustically shielded by intervening ancillary buildings. Plant operational noise was measured to be approximately 62 dB at TB-1. Measurement location TB-2 was located approximately 400 south of the Project site, with very little acoustical shielding between the main processing area and the measurement location. Plant operational noise was measured to be approximately 66 dB at TB-2.

The closest sensitive receptors (residential land uses) to the proposed main processing area are located approximately 7,000 feet (Applicant-owned employee housing) and 10,000 feet to the southeast near the community of Three Rocks. Taking into account the above described reference noise level measurements and the typical rate of noise attenuation with increased distance from a point source (- 6 dB/doubling of distance), pistachio plant noise levels would be expected to be in the range of approximately 31-34 dB at the residential land uses within the Three Rocks community and approximately 35-38 dB at the Applicant-owned employee housing residential land uses.

The above-described Project operational noise levels do not exceed the County's daytime noise level standard of 50 dB L50 or the County's nighttime noise level standard of 45 dB L50 for stationary (non-transportation) noise standards (provided above as Table 3.13-5) at the closest sensitive receptor locations. Furthermore, the Project's operational noise levels would not be expected to exceed existing (without Project) ambient noise levels (see Table 3.13-8) at the locations of the sensitive receptors.

It should be noted, the Project's operational noise levels provided above do not take into account any acoustical shielding that would be provided by intervening ancillary buildings or atmospheric and ground absorption. Additionally, the Project's operational noise levels represent

only those that would be expected to occur during peak harvest season (approximately 6-week harvest period, which typically occurs during August to October). Operational noise levels during the remainder of the year would be expected to be significantly lower. Therefore, the above-described noise levels should be considered a worst-case assessment of Project-related noise levels at nearby sensitive receptor locations. Although there are no significant impacts anticipated from operational noise, mitigation measures shall be applied in order to minimize operational noise impacts (Mitigation Measure NOI-2). With implementation of mitigation, the impact from operational noise remains ***less than significant.***

Spreader / Shredder

The Project would also utilize a spreader (shredder) equipment to distribute processed solid waste (hulls, twigs, leaves) onto an adjacent 160-acre parcel of land, west of the main Project site. Shredding will occur on both the 160 acre parcel as well as within the main 315-acre processing site. The use of the spreader equipment would coincide with the above-described peak harvest season.

The exact make/model of the spreader to be utilized was not known at the time of this analysis. However, according to the Project Applicant, the shredder would be comparable to a Meyer Farm Equipment Large Capacity SXI Industrial Spreader. The spreader is either used in conjunction with a tractor or a truck to pull the equipment. WJVA staff spoke with a Meyer Farm Equipment representative, who indicated that no noise level data is available through the manufacturer. However, the Meyer representative indicated that the noise levels associated with the spreader are typically less than that of the tractor or truck being utilized to pull the spreader.

WJVA has conducted measurements of the noise levels produced by slowly moving trucks and tractors for a number of studies. Such truck/tractor movements would be expected to produce noise levels in the range of 65 to 70 dBA at a distance of 100 feet. Taking into account standard rates of noise attenuation with increased distance from the source, noise levels associated with spreader equipment would be expected to be less than 35 dB at the closest sensitive receptor locations. Such levels are below the County's noise level standards, and additional mitigation measures are not required.

Ambient Noise

As discussed above, existing (without Project) ambient noise levels at the closest sensitive receptors generally ranged between approximately 37 to 46 dB L50 during daytime hours (7:00 a.m. to 10:00 p.m.) and between approximately 33 to 46 dB L50 during nighttime hours (10:00 p.m. to 7:00 a.m.). For sensitive receptors located in the vicinity of ambient noise measurement site LT-1 (community of Three Rocks), average existing ambient daytime (without Project) noise

levels were measured to be approximately 42 dB L50 and average ambient nighttime noise levels were measured to be approximately 43 dB L50. The slightly higher average nighttime noise levels are likely due to noise associated with existing early morning agricultural activities as well as early morning rooster noise within the community. For sensitive receptors located in the vicinity of ambient noise monitoring site LT-2 (applicant-owned employee housing), average ambient daytime levels were measured to be approximately 41 dB L50 and average ambient nighttime levels were measured to be approximately 38 dB L50.

The human ear generally cannot perceive an increase (or decrease) in noise levels less than 3 dB. During construction a temporary increase in ambient noise levels would occur in the vicinity of the Project site. This increase would be localized within the proximity of the Project site. Construction noise would not result in an increase in existing ambient noise levels at any off-site noise sensitive receptor location. It is possible that construction noise may on occasion be audible at sensitive receptor locations, but there would not be a measurable increase in noise and construction noise would not result in an increase of 3 dB or greater at any sensitive receptor location. Operational activities would result in periodic increases in ambient noise levels in the vicinity of the Project site. This increase would be localized within the proximity of the Project site. Operational noise would not result in an increase in existing ambient noise levels at noise sensitive receptors in the vicinity of ambient noise monitoring site LT-1. Operational noise could result in an increase of less than 3 dB in the vicinity of LT-2. However, such noise levels would remain below the County's applicable 45 dB L50 nighttime noise level standard. Operational noise would not result in an increase of 3 dB or greater at any sensitive receptor location.

Consequently, potential impacts from changes in ambient noise due to Project construction and operations will be below 3 dB for all potential sensitive receptors. The Project will not cause a substantial increase in ambient noise levels, and additional mitigation measures are not required.

Impact Determination

As described herein, the Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project, or exceed standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Although the impact is determined to be ***less than significant***, mitigation has been applied to ensure impacts remain insignificant.

Mitigation Measures

NOI - 1: All construction equipment shall be equipped with noise control devices (e.g. mufflers) in accordance with manufacturers' specifications. Construction

equipment shall be periodically inspected to ensure proper maintenance and presence of noise control devices (e.g. lubrication, mufflers that do not leak, and shrouding).

NOI - 2: All operational equipment shall be maintained according to manufacturers' specifications and all noise-generating operational equipment shall be equipped with mufflers.

Impact 3.13-2: *Generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant. The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. None of these activities are anticipated to occur with construction or operation of the proposed Project. Due to the distances between the Project site and the closest sensitive receptor locations, vibration from construction activities would not be expected to be detected at the closest sensitive land uses during any period of Project construction. As a point of reference, typical vibration levels at distances of 100 feet and 300 feet are summarized by Table 3.13-12.

Table 3.13-12
Typical Vibration Levels During Construction[11]

	PPV (in/sec)	
Equipment	**@ 100´**	**@ 300´**
Bulldozer (Large)	0.011	0.006
Bulldozer (Small)	0.0004	0.00019
Loaded Truck	0.01	0.005
Jackhammer	0.005	0.002
Vibratory Roller	0.03	0.013
Caisson Drilling	0.01	0.006

After full Project build out, it is not expected that ongoing operational activities will result in any vibration impacts at nearby sensitive uses. Any impacts would be ***less than significant.***

[11] Environmental Noise Assessment for the Kamm Avenue Pistachio Plant prepared by WJV Acoustics. September 2020. Appendix H.

Mitigation Measures

None are required.

Impact 3.13-3: *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

Less Than Significant. The Project is not located within two miles of a public airport or private airstrip. Therefore, there is a ***less than significant impact.***

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to noise is generally site-specific rather than cumulative in nature because each project site has different noise considerations that would be subject to review. Impacts from elevated noise only would exist where there are sensitive noise receptors that be adversely affected by exposure to elevated noise. Future development within the area could increase noise exposure of noise sensitive receptors to elevated noise levels. However, due to the agricultural setting of the Project area, substantial development is not anticipated in the area. Construction of the individual development projects allowed under the land use designations of Fresno County's General Plan may result in the generation of site-specific noise increases from stationary noise sources, and may contribute incrementally to noise from mobile sources. Additionally construction noise from individual development projects allowed under Fresno County's General Plan may result in the generation of site-specific noise increases.

As indicated herein, the Project will not result in significant permanent increases in noise or vibration levels. In addition, temporary construction noise does not constitute a significant impact either at the project-level or cumulative level. Therefore, the proposed Project's incremental contribution to cumulative noise impacts would be ***less than cumulatively considerable***.

3.14 Population and Housing

This section of the DEIR evaluates the potential environmental effects related to population and housing associated with implementation of the proposed Project. No comments pertaining to population and housing were received during the NOP public review period.

Environmental Setting

The proposed Project lies within the western portion of Fresno County. The unincorporated community of Three Rocks, a U.S. Census designated place with a population of approximately 250, is located approximately 1.5 miles to the south of the proposed Project's primary pistachio hulling and processing equipment. The unincorporated population of Fresno County was 175,561 in 2019.[1] The nearest city is the City of Mendota, approximately 15 miles north of the Project site, with a 2019 population of 12,315.[2] The City of Fresno is the most populous city in Fresno County, at 536,683 and is approximately 35 miles to the northeast of the Project site.

The Project site is designated as Agricultural in the Fresno County General Plan and zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size). Existing land uses surrounding the Project site consist of agricultural land, including nearby pistachio orchards owned and operated by affiliated entities that would be served by the proposed processing facilities.

Regulatory Setting

Federal Regulations

US Department of Housing and Urban Development (HUD)

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business.[3]

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[1] California Department of Finance. E-4 Population Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-4/2010-19/. Accessed October 2020.
[2] Ibid.
[3] U.S. Department of Housing and Urban Development, Mission, http://portal.hud.gov/hudportal/HUD?src=/about/mission. Accessed October 2020.

State of California Regulations

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."[4] "In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted.

State Housing Law also mandates that local governments identify existing and future housing needs in a Regional Housing Needs Assessment (RHNA).

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local Regulations

Fresno County General Plan

The Fresno County General Plan was last updated in 2000 and does not contain any goals, policies, or implementation measures related to Population and Housing as these topics are addressed under CEQA. However, in February of 2013, the Fresno COG assembled a Regional Housing Needs Allocation Technical Committee with representatives from all Fresno County local governments. This committee prepared a Fresno County Multi-Jurisdictional Housing Element for Fresno County governments with the goal of creating regional coordination to address countywide housing issues and needs. This regional housing element update covers the

[4] California Department of Housing and Community Development, Mission, http://www.hcd.ca.gov/mission.html. Accessed October 2020.

planning period of December 2015 through December, 2023, representing the 2015-2023 Housing Element for 13 jurisdictions in Fresno County, including the County of Fresno.[5]

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- *Induce substantial unplanned population growth in an area, either directly or indirectly?*
- *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

Impacts and Mitigation Measures

Impact 3.14-1: *Induce substantial unplanned population growth in an area, either directly or indirectly or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

Less Than Significant Impact. The proposed Project includes the construction and operation of a 177,665 square foot pistachio processing facility on approximately 135-acres of land in western Fresno County. Employment is estimated at 60 people year-round and an additional 60 people during harvest periods with two shifts per day.

Proposed Project construction would provide short-term construction jobs over 40 weeks. Many of the construction jobs would be temporary and would be specific to the variety of construction activities. The workforce would include a variety of construction trade workers, such as cement finishers, ironworkers, welders, carpenters, electricians, painters, and laborers. Generally, construction workers are only at a job site for the timeframe in which their specific skills are needed to complete that phase of construction. Although the proposed Project would increase the number of employees at the Project site during construction activities, it is expected that local and regional construction workers would be available to serve the proposed Project's construction needs. Similarly, it is expected that the 60 year-round employees and the 60 additional seasonal

[5] Fresno Multi-Jurisdictional 2015-2023 Housing Element. https://www.co.fresno.ca.us/home/showdocument?id=8428. Accessed October, 2020.

employees will come from the existing Fresno County workforce as the unemployment rate in Fresno County was 10.4% as of September 2020.[6]

The site is currently a recently-disked agricultural field with mowed grasses dominating the site with various on-site structures and stored materials surrounded by chain-link fencing. There are no houses on-site and no homes in the immediate vicinity that would be displaced because of Project implementation. Impacts relating to population and housing would be ***less than significant.***

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. Cumulative population and housing are typically site- and project-specific. As discussed above, construction workers and operational employees are expected to come from the regional workforce and there are no houses on-site that would be displaced with Project implementation. The Project's contribution to cumulative population and housing impacts are ***less than cumulatively considerable***.

[6] State of California Employment Development Department. Fresno Metropolitan Statistical Area for Fresno County. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/frsn$pds.pdf. Accessed October 2020.

3.15 Public Services

This section of the DEIR identifies potential impacts associated with the County's police and fire protection services, school facilities, and other public facilities. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Fire Protection

Fire protection services in the vicinity of the Project site are provided by the Fresno County Fire Protection District. The Fresno County Fire Protection District serves a population of more than 220,000 in a service area encompassing approximately 2,655 square miles in the communities of Tarpey Village, Calwa, Easton, Malaga, Del Rey, Caruthers, San Joaquin, Tranquillity, Prather, Friant, Tollhouse, Wonder Valley, Cantua Creek, Three Rocks, Five Points, Centerville, Tivy Valley, and Sand Creek and the cities of San Joaquin, Parlier, Mendota, and Huron. In cooperation with the California Department of Forestry and Fire Protection (CAL FIRE), the Fresno County Fire Protection District provides fire suppression, emergency medical service, rescue, fire prevention, and education from 13 staffed fire stations and five paid call firefighter stations. The nearest fire station to the Project site is Station 94, located approximately 20 miles southeast of the Project site at 24125 W. Dorris Avenue in Coalinga (near the intersection of Interstate 5 and Highway 198).

Police Services

The Fresno County Sheriff's Department provides law enforcement services to the unincorporated areas of the County and several incorporated cities by contract. Patrol services are divided into four patrol areas, each commanded by a lieutenant who supervises field services from a substation located in each of the areas. The Project site is located within Patrol Area 1. Area 1 encompasses the cities of Coalinga, Huron, San Joaquin, Kerman, Mendota, and Firebaugh, as well as the unincorporated communities of Tranquillity, Biola, Five Points, Helm, Three Rocks, Cantua Creek, and Dos Palos. Area 1 personnel provide 24-hour patrol and detective services, crime prevention, and vehicle abatement, as well as a host of community liaison functions. The Area 1 substation office is located at 21925 W. Manning Avenue in the City of San Joaquin, approximately 13 miles northeast of the Project site.

Schools

There are no schools within the vicinity of the Project. The nearest school is Cantua Elementary School, located approximately five miles southeast of the Project site at 29288 W. Clarkson Avenue, Cantua Creek, CA.

Parks

There are no parks within the vicinity of the Project. The nearest park is Peter Rusconi Park, located approximately 13 miles northeast of the Project site in the City of San Joaquin.

Libraries

There are no public libraries within the vicinity of the Project. The nearest library is Tranquillity Branch Library, located approximately 11 miles northeast of the Project site in the community of Tranquillity.

Regulatory Setting

Federal Regulations

There are no federal regulations pertaining to public services that apply to the proposed Project.

State of California Regulations

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal- OSHA) has established minimum standards for fire suppression and emergency medical services (EMS). The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all firefighting and emergency medical equipment.

City Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could

result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Fire Code

The California Fire Code (CFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC also contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise buildings, childcare facility standards, and fire suppression training.

Local Regulations

Fresno County General Plan

The following lists goals and policies from the Fresno County 2000 General Plan pertaining to public services that are applicable to the proposed Project.

Goal PF-G: To protect life and property by deterring crime and ensuring the prompt and efficient provision of law enforcement service and facility needs to meet the growing demand for police services associated with an increasing population.

Policy PF-G.2: The County shall strive to maintain a staffing ratio of two sworn officers serving unincorporated residents per 1,000 residents served. (This count of officers includes all ranks of deputy sheriff personnel and excludes all support positions and all sworn officers serving county wide population interests such as bailiffs, and sworn officers serving contract cities and grant-specific populations).

Policy PF-G.6: The County shall promote the incorporation of safe design features (e.g., lighting, adequate view from streets into parks) into new development by providing Sheriff Department review of development proposals.

Goal PF-H: To ensure the prompt and efficient provision of fire and emergency medical facility and service needs, to protect residents of and visitors to Fresno County from injury and loss of life, and to protect property from fire.

Policy PF-H.1: The County shall work cooperatively with local fire protection districts to ensure the provision of effective fire and emergency medical services to unincorporated areas within the county.

Policy PF-H.2: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in unincorporated areas of the County shall not be approved unless adequate fire protection facilities are provided.

Policy PF-H.5: The County shall require that new development be designed to maximize safety and minimize fire hazard risks to life and property.

Policy PF-H.8: The County shall encourage local fire protection agencies in the county to maintain the following as minimum standards for average first alarm response times to emergency calls:

- 5 minutes in urban areas;
- 15 minutes in suburban areas; and
- 20 minutes in rural areas.

Policy PF-H.10: The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other State and local ordinances.

Policy PF-H.11: The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services to the public, consistent with current practice.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

  Fire protection?

  Police protection?

  Schools?

  Parks?

  Other public facilities?

Impacts and Mitigation Measures

Impact 3.4-1: *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Less Than Significant. The proposed Project consists of construction and operation of a pistachio processing facility in western Fresno County in a rural area dominated by agricultural uses.

Employment is estimated at 60 people year-round and an additional 60 people during the six-week harvest periods with two shifts per day.

Proposed Project construction would provide short-term construction jobs over 40 weeks. Many of the construction jobs would be temporary and would be specific to the variety of construction activities. The workforce would include a variety of construction trade workers, such as cement finishers, ironworkers, welders, carpenters, electricians, painters, and laborers. Generally, construction workers are only at a job site for the timeframe in which their specific skills are needed to complete that phase of construction. Although the proposed Project would increase the number of employees at the Project site during construction activities, it is expected that local and regional construction workers would be available to serve the proposed Project's construction needs. Similarly, it is expected that the 60 year-round employees and the 60 additional seasonal employees will come from the existing Fresno County workforce as the unemployment rate in Fresno County was 10.4% as of September 2020.[1] Therefore, the Project will not result in significant population growth in the area. As with other areas of the County, the Project will require fire and police protection services. These topics are addressed individually below.

Fire Protection

The Project will coordinate with the California Office of the State Fire Marshall and the Fresno County Fire Department to provide training for personnel to minimize fire risk, properly manage combustible vegetation or agricultural products on and around the Project site, and discuss emergency responses and routes. Fire-suppression equipment (e.g., fire extinguishers) would be made available on the Project site at all times. All heavy equipment would be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

An on-site huller tank will maintain a supply of 100,000 gallons of process water (0.3 acre-feet) for fire suppression purposes in accordance with Fresno County Fire Department requirements. In addition, internal roads would be paved or surfaced with crushed asphalt or another commercially available pervious materials and would provide a fire buffer.

The nearest fire station to the project site is Fresno County Fire District Station 94. In accordance with General Plan Policy PF-H.8, local fire protection agencies are to maintain an average 20-minute first alarm response time to emergency calls. Station 94 is located approximately 20 miles

[1] State of California Employment Development Department. Fresno Metropolitan Statistical Area for Fresno County. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/frsn$pds.pdf. Accessed October 2020.

southeast of the Project site at 24125 W. Dorris Avenue in Coalinga (near the intersection of Interstate 5 and Highway 198). The most direct route from Station 94 would be from Interstate 5 to Highway 33 to Kamm Avenue. The speed limits on these roadways varies from 55 to 70 MPH; therefore, fire response would be provided within approximately 20 minutes. As such, the Project site would be adequately served by the existing fire station. The Project will not require additional staffing or an expansion of existing fire suppression services. Therefore, this impact is determined to be ***less than significant.***

Police Protection

The boundary of the Project would be secured by a black 6-foot-high chain-link perimeter fence around the 80-acre main plant area, the fumigation area, the stormwater basin, and the process water ponds on the southern border of the site. Motion sensitive, directional security lights would be installed to provide adequate illumination around access points and operational locations within the site. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and will conform with applicable Fresno County rules and regulations for outdoor lighting. Off-site security personnel could be dispatched during nighttime hours or could be onsite, depending on security risks and operating needs. Security cameras, motion detectors, or similar technology would be installed to allow for monitoring of the site through review of live footage 24 hours per day, 7 days per week. Security cameras or other equipment would be placed along the perimeter of the facility as needed.

During all phases of the Project, signage for safety and identification would be posted around the perimeter of the Project site. No large billboard or commercial advertisement signage will occur.

The Fresno County Sheriff's Department is responsible for law enforcement in unincorporated areas of the County. According to the General Plan Background Report, the Fresno County Sheriff's Department currently has a ratio of 1.89 officers per 1,000 residents. Response times vary based on call volume, proximity of the call to the nearest police office, and the nature of the call. The proposed Project would not generate new permanent residents, and therefore the number of emergency law enforcement calls originating from the Project site would remain low. Operation of the proposed Project would not result in the need for additional police facilities or result in the hiring of additional law enforcement personnel. Impacts associated with police protection services would be ***less than significant*** during operation of the proposed Project.

Schools, Parks and Libraries

As previously discussed, although the proposed Project would increase the number of employees at the Project site during construction activities, it is expected that local and regional construction

workers would be available to serve the proposed Project's construction needs. Similarly, it is expected that the 60 year-round employees and the 60 additional seasonal employees will come from the existing Fresno County, or surrounding area workforce as the unemployment rate in Fresno County was 10.4% as of September 2020. Therefore, the Project will not result in significant population growth in the area. Impacts to schools, parks and libraries are generally the result of new residential developments. Since there are no proposed new residential facilities associated with the Project and the Project anticipates utilizing the existing workforce in the area, there are ***no significant impacts*** to these facilities.

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to public services is generally area-specific rather than cumulative in nature because each project site has different considerations that would be subject to review. The service area for Fresno County's services is considered the cumulative analysis area. Cumulative growth that would occur over the life of the Fresno County General Plan / EIR will result in increased demand for public services. As the demand for public services increases, there will likely be a need to increase staffing and equipment in order to maintain acceptable performance standards. Cumulative impacts to public services are primarily related to other development projects that could occur during the same time frame as those considered for this Project and within the same vicinity as this Project. Because the Project does not result in significant long-term impacts to public services, the Project's incremental contribution to cumulative impacts to public services would be ***less than cumulatively considerable***.

3.16 Recreation

This section of the DEIR identifies potential impacts associated with the County's recreational services with Project development. NOP comment letters were received pertaining to this topic.

Environmental Setting

Fresno County has several regional parks, in addition to state and national parks, national forest, wilderness areas, and ecological reserves. Regional recreational facilities maintained by the Fresno County Parks Division include ten developed and three undeveloped park sites, five fishing access areas, and one boat launching ramp. County parks include approximately 1,165 acres of parkland, approximately 800 acres of which is developed.[1] There are no County-maintained recreational facilities within 15 miles of the proposed Project site.

The Mendota Wildlife Area is the closest recreational area to the proposed Project site, located approximately ten miles northeast of the Project site. The wildlife area consists of approximately 11,800 acres of flatlands and floodplains and offers fishing, wildlife viewing, and hunting opportunities, and is managed y the Calof Fish and Wildlife.[2]

Regulatory Setting

State of California Regulations

Quimby Act

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreation facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

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[1] Fresno County General Plan Update. Public Review Draft Environmental Impact Report. http://www2.co.fresno.ca.us/4510/4360/General_Plan/GP_Final_EIR/EIR/Pubserv4-6.pdf. Page 4.6-13. Accessed October 2020.
[2] California Department of Fish and Wildlife. Mendota Wildlife Area. https://wildlife.ca.gov/Lands/Places-to-Visit/Mendota-WA. Accessed October 2020.

Local Regulations

Fresno County General Plan

The Fresno County General Plan Open Space and Conservation Element discusses policies to enhance recreational opportunities in the County by encouraging further development of public and private recreational opportunities.

Policy OS-H.2 of the Fresno County General Plan states: "The County shall strive to maintain a standard of five (5) to eight (8) acres of County-oweed parkland per 1,000 residents in the unicorporated area.

Fresno County Regional Bicycle & Recreational Trails Master Plan

Approved September 24, 2013, this plan provides a comprehensive long-range planning effort for the creation of an extensive regional bikeway and recreational trail network that connects the cities of Fresno County to unincorporated areas. The plan area includes all of the unincorporated areas of the County.

Fresno County Regional Active Transportation Plan

Approved in February 2018, the Fresno Regional Active Transportation Plan (ATP) is a comprehensive, regional document that identifies key bicycle and pedestrian projects in Fresno County. This document also assists agencies with acquiring funding and implementing the projects. The ultimate goal of the plan is to add 1,909 miles of bike paths, lanes, and routes, 89 miles of sidewalks, and to improve 80 intersections and street crossing and pedestrians.[3]

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Guidelines Appendix G.

- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

[3] Fresno Council of Governments. Active Transportation. Fresno County Regional Trails Plan. https://www.fresnocog.org/project/active-transportation/. Accessed October 2020.

- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impacts and Mitigation Measures

Impact 3.16-1: *Would the project increase the use of exiting neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated OR does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

No Impact. Increases in the use of recreational facilities typically are associated with either substantial increases in population or a substantial reduction in the availability of existing parks or recreational facilities. The Project site is located over ten miles south of the City of Mendota and is not located within or adjacent to a residential area. The Project is not located within the immediate vicinity of any parks or recreational facilities, and no parks or existing recreational facilities are located on the site. Project activities would not involve the removal of any existing parks or recreational facilities. Project construction and operation are not likely to cause an increase in local population, as described in Section 3.14, Population and Housing, as it is anticipated that most of the Project workforce would be hired locally. Further, as described in Chapter 6, CEQA Considerations, the Project is not anticipated to result in local population growth and would not affect the County's ability to provide recreational facilities at the ratio described in General Plan Policy OS-H.2. Therefore, the Project would not result in a substantial increase in the existing demand for recreational facilities, would not result in or accelerate the substantial physical deterioration of existing facilities, and would not require the construction or expansion of recreational facilities.

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to recreational facilities is generally area-specific rather than cumulative in nature because each project site has different recreational considerations that would be subject to review. As described

above, proposed Project implementation would not result in an increased demand for recreational facilities, the deterioration of existing facilities, or the construction or expansion of recreational facilities. The proposed Project's incremental contribution to cumulative recreation impacts would be ***less than cumulatively considerable***.

3.17 Transportation/Traffic

This section of the DEIR identifies potential impacts of the proposed Project pertaining to transportation and traffic in and around the Project vicinity. No IS/NOP comment letters were received pertaining to this topic. The information and analysis presented in this Section are based on the Traffic Impact Study prepared for the Project which is included as Appendix I.

Environmental Setting

The proposed Project site is located in the western portion of Fresno County in an area dominated by agricultural land uses and rural housing. The site is bounded by Kamm Avenue to the north, San Bernardino Avenue to the west, Conejo Avenue to the south and Ohio Avenue to the east.

The site is currently zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) and is designated by the General Plan Agriculture. The Project site is characterized by barren land, including plowed fields and roads with no vegetation, and areas characterized with annual non-native forbs and grasses.

<u>Important Roadways</u>

Important roadways serving the Project include:

- **Interstate 5** is an existing north-south four-lane freeway in the vicinity of the proposed Project. Interstate 5 spans the West Coast originating in San Diego, California and culminating at Blaine Washington. In this area, Interstate 5 serves most traffic destined for the Bay Area and southern California as it provides a shorter travel distance and avoids urban traffic when compared to California's State Route 99.

- **Kamm Avenue** is an existing east-west two-lane undivided arterial adjacent to the proposed Project. In this area, Kamm Avenue exists between Interstate 5 and State Route 33.

- **State Route 33** is an existing north-south two-lane undivided arterial in the vicinity of the proposed Project. In this area, State Route 33 extends north of Interstate 5, approximately 6.45 miles south of Kamm Avenue. State Route 33 is also known as Derrick Avenue and provides connection to the communities of Mendota, Firebaugh and Dos Palos to the north.

Airports

The nearest public airport is the William Robert Johnson Municipal Airport in Mendota, over ten miles north of the Project site while the nearest private airport is the San Joaquin Airport, over 12 miles to the northeast.

Public Transportation Services

Public transportation in the Project area is provided by the Fresno County Rural Transit Agency (San Joaquin Transit), which offers weekday dial-a-ride public transportation service for residents in communities such as Cantua Creek, Three Rocks and Tranquillity.

Non-Motorized Transportation

There are currently no dedicated pedestrian or bicycle facilities in the immediate vicinity of the Project site or along the surrounding roadways or highways. A Class I Planned Multiple Purpose Bikeway is planned alongside the Friant-Kern Canal[1], approximately one mile north of the proposed Project site.

Regulatory Setting

Federal Regulations

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

[1] Fresno County Regional Bicycle and Recreation Trails Master Plan. https://www.co.fresno.ca.us/home/showpublisheddocument?id=8044. Figure 4. Accessed November 2020.

- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State of California Regulations

California Department of Transportation

The California State Department of Transportation (Caltrans) has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on California highways. Fresno County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to the potential transportation impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Assembly Bill 32 (Global Warming Act of 2006) and Senate Bill 375

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (Act), requires California to reduce its greenhouse gas (GHG) emissions to levels presented in the year 1990 by 2020. In response, the California Air Resources Board (CARB) is responsible for creating guidelines for this Act. In 2008, CARB adopted its proposed Scoping Plan, which included the approval of Senate Bill (SB) 375 as a means of achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks helps the State comply with AB 32.

Established through CARB, SB 375 lists four major components and requirements: (1) it requires regional GHG emissions targets; (2) it requires creating a Sustainable Communities Strategy (SCS) that provides a plan for meeting the regional targets; (3) it requires that regional housing elements and transportation plans be synchronized on 8-year schedules; and (4) it requires transportation and air pollutant emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

Senate Bill 743

Senate Bill (SB) 743 was approved by then Governor Brown on September 27, 2013. SB 743 created a path to revise the definition of transportation impacts according to California Environmental Quality Act (CEQA). The revised CEQA Guidelines requiring a vehicle miles traveled (VMT) analysis became effective December 28, 2018; however, agencies had until July 1, 2020 to finalize their local guidelines on VMT analysis. The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies of reducing VMT and greenhouse gases (GHG). Three objectives of SB 743 related to development are to reduce GHG, diversify land uses, and focus on creating a multimodal environment. It is hoped that this will spur infill development.

Local Regulations

Fresno County Regional Transportation Plan

The Fresno County Regional Transportation Plan (RTP) is a long-range planning document used for identifying and prioritizing long-range transportation improvements over a 24-year period. The latest RTP was prepared and adopted by the Fresno Council of Governments in July 2018. The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight and finances. The RTP must be revised at least every four years, as the County is designated as non-attainment for federal air quality standards.

Fresno County General Plan

The following lists goals and policies from the Fresno County 2000 General Plan pertaining to transportation that are applicable to the proposed project (County 2000b).

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.8: The County shall ensure that land development that affects roadway use or operation or requires roadway access to plan, dedicate, and construct required improvements consistent with the criteria in the Circulation Diagram and Standards section of this element.

Thresholds of Significance

In accordance with the CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?

Analysis Methodology

JLB Traffic Engineering, Inc. prepared a Traffic Impact Analysis (TIA) (see Appendix I) analyzing potential impacts the proposed Project would have on the existing roadway and transportation system. This was prepared in general conformance with County of Fresno requirements and *Caltrans Guide for the Preparation of Traffic Impact Studies*. The TIA provides an analysis of the surrounding roadway system and the effects of the proposed Project on the existing and planned roadway infrastructure, including potential mitigation measures to reduce Project transportation impacts. Study results are summarized in the text below. For the full text, graphics, and traffic counts, please refer to Appendix I.

Intersection Analysis

Level of Service Analysis Methodology

Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from "A" to "F", with "A" indicating no congestion of any kind and "F" indicating unacceptable congestion and delays. It describes the operating conditions for signalized and unsignalized intersections. It should be noted that LOS is no longer a requirement to be studied under CEQA. Instead, a project's transportation impacts are evaluated through an analysis of vehicle miles traveled (VMT) pursuant to Senate Bill 743. Data pertaining to LOS is being provided for informational and disclosure purposes. However, the Project's VMT analysis is provided in Impact 3.17-2.

The *Highway Capacity Manual* (HCM) is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. Synchro software was used to define LOS in this evaluation. Details regarding these calculations are included in Appendix D of Appendix I.

Criteria of Significance. The County of Fresno has established LOS C as the acceptable level of traffic congestion on county roads and streets that fall entirely outside the Sphere of Influence (SOI) of a City. For those areas that fall within the SOI of a City, the LOS criteria of the City are the criteria of significance used in this Report. LOS C is used to evaluate the potential significance of LOS impacts to Fresno County intersections and segments that fall outside the SOI of a City. In this case, all study facilities fall outside the SOI of a City, therefore, the County of Fresno LOS threshold is utilized.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. 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 this TIA, all study facilities within Caltrans jurisdiction utilize LOS C to evaluate the potential significance of LOS impacts.

Analysis Locations

Study Facilities. The existing peak hour turning movement and segment volume counts were conducted at the study intersections and segments on October 1, 2019. Seasonal and daily factors were provided by County of Fresno staff to better reflect annual average daily and peak hour volumes. Based on information provided by the County, a seasonal factor of 0.96 and a daily

factor of 0.89 was applied to the turning movement and segment volume counts. The traffic counts for the existing study intersections and segments are contained in Appendix B of Appendix I. The existing intersection turning movement volumes (adjusted with a 0.96 seasonal and 0.89 daily factor), intersection geometrics and traffic controls are illustrated in Figure 2 of Appendix I.

Study Intersections:

1. Interstate 5 Southbound (SB) Ramps / Kamm Avenue
2. Interstate 5 Northbound (NB) Ramps / Kamm Avenue
3. Main Project Access / Kamm Avenue
4. State Route 33 / Kamm Avenue

Study Segments:

1. Kamm Avenue between Interstate 5 and Main Project Access
2. Kamm Avenue between Main Project Access and State Route 33

Analysis Time Periods and Scenarios

The study time periods include the peak hours determined within each of the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term Plus-Project (Buildout) Conditions
- Cumulative Year 2040 No-Project Conditions; and
- Cumulative Year 2040 Plus-Project Conditions.

Impacts and Mitigation Measures

Impact 3.17-1: *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Less than Significant Impact. The proposed Project includes the construction and operation of a pistachio processing plant and adjacent solids management site, which could result in potentially significant increases in traffic in and around the Project area. The Traffic Impact Analysis prepared for the Project (Appendix I) is summarized herein.

Existing Traffic

Tables 3.17-1 and 3.17-2 present pre-Project (existing) traffic conditions in the Project area. As of October 2020, all study intersections operate at an acceptable LOS during both peak periods. Similarly, all study segments operate at an acceptable LOS.

Table 3.17-1
Existing Intersection LOS Results[2]

ID	Intersection	Intersection Control	AM (5:30 – 6:30) Peak Hour		PM (3:30 – 4:30) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Interstate 5 SB Ramps / Kamm Avenue	One-Way Stop	8.6	A	0.0	A
2	Interstate 5 NB Ramps / Kamm Avenue	One-Way Stop	8.5	A	8.4	A
3	Main Project Access / Kamm Avenue	Does Not Exist	N/A	N/A	N/A	N/A
4	State Route 33 / Kamm Avenue	One-Way Stop	10.5	B	10.0	B

Table 3.17-2
Existing Segment LOS[3]

ID	Segment	Limits	Lanes	24-hour	LOS
1	Kamm Avenue	Interstate 5 and Main Project Access	2	329	B
2	Kamm Avenue	Main Project Access and State Route 33	2	329	B

Trip Generation

Trip generation rates for the proposed Project were prepared based on data within the Project Description. While it is reasonable to assume that carpooling will take place between some of the

[2] Traffic Impact Analysis Report for the Kamm Avenue Processing Plant. Prepared by JLB Traffic Engineering, Inc. See Appendix I, page 11.
[3] Ibid.

employees, to be conservative in assessing the Project's traffic impacts, the TIA assumes that no carpooling will take place. Based on the Project Description, the Project will employ up to 60 staff during the off-peak season and up to 120 staff during the peak harvest season. For purposes of the TIA, the peak harvest season was analyzed.

As described in the Project Description, traffic to the Project will consist of the following types: non-harvest employees, harvest (seasonal) employees, visitors, delivery vehicles, occasional maintenance vehicles, recycled waste vehicles, solid waste vehicles, seasonal harvest trucks, and shipping trucks. Due to the nature of the facility and the distance from any major cities, there will be no on-site sales.

Harvest season will generally run from early September to mid-October. During the two (2) week peak harvest season up to 150 harvest trucks will deliver crop to the Project site. The harvest trucks are owned by others and as a result would not be stored at the Project site. During the peak harvest season, the Project anticipates receiving up to eight (8) trucks per day for outbound shipment of hulled pistachio product. It is projected that the Project site is going to receive nine (9) total solid waste and two (2) recycled waste vehicles during the peak harvest season.

Table 3.17-3 presents the trip generation for the proposed Project with trip generation rates for Employees, Visitors, Delivery Services, Regular Solid Waste, Seasonal Solid Waste, Harvest Trucks and Shipping Trucks. The proposed Project is estimated to generate a maximum of 590 daily trips, 103 AM peak hour trips and 23 PM peak hour trips.

Table 3.17-3
Proposed Project Trip Generation[4]

Land Use (ITE Code)	Size	Unit	Daily		AM (5:30 – 6:30) Peak Hour						PM (3:30 – 4:30) Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Employees	120	EA	2.00	240	0.75	67	33	60	30	90	0.00	0	0	0	0	0
Visitors	2	EA	2.00	4	0.00	0	0	0	0	0	1.00	50	50	1	1	2
Delivery Vehicles	2	EA	2.00	4	0.00	0	0	0	0	0	1.00	50	50	1	1	2
Maintenance Vehicles	2	EA	2.00	4	0.00	0	0	0	0	0	1.00	50	50	1	1	2
Recycled Waste	2	EA	2.00	4	0.00	0	0	0	0	0	0.24	0	0	0	0	0

[4] Traffic Impact Analysis Report for the Kamm Avenue Processing Plant. Prepared by JLB Traffic Engineering, Inc. See Appendix I, page 16.

Solid Waste	9	EA	2.00	18	0.084	0	0	0	0	0	0.24	50	50	1	1	2
Harvest Trucks	150	EA	2.00	300	0.00	52	48	7	6	13	.084	48	52	6	7	13
Shipping Trucks	8	EA	2.00	16	0.00	0	0	0	0	0	0.24	40	60	1	1	2
Total Driveway Trips				**590**				**67**	**36**	**103**				**11**	**12**	**23**

Existing Plus Project Phase I

The Existing plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 5 of Appendix I illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix G of Appendix I. Table 3.17-4 presents a summary of the Existing plus Project peak hour LOS at the study intersections, while Table 3.17-5 presents a summary of the Existing plus Project LOS for the study segments.

Table 3.17-4
Existing Plus Project Intersection LOS Results[5]

ID	Intersection	Intersection Control	AM (5:30 – 6:30) Peak Hour		PM (3:30 – 4:30) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Interstate 5 SB Ramps / Kamm Avenue	One-Way Stop	8.7	A	0.0	A
2	Interstate 5 NB Ramps / Kamm Avenue	One-Way Stop	8.5	A	8.4	A
3	Main Project Access / Kamm Avenue	One-Way Stop	0.0	A	9.8	A
4	State Route 33 / Kamm Avenue	One-Way Stop	10.6	B	10.2	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls. LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table 3.17-5
Existing Plus Project Intersection LOS Results[6]

ID	Segment	Limits	Lanes	24-hour	LOS
1	Kamm Avenue	Interstate 5 and Main Project Access	2	485	B
2	Kamm Avenue	Main Project Access and State Route 33	2	763	B

[5] Traffic Impact Analysis Report for the Kamm Avenue Processing Plant. Prepared by JLB Traffic Engineering, Inc. See Appendix I, page 19.
[6] Ibid.

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables.

Near Term Plus Project

The Near Term Year 2025 plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 6 of Appendix I illustrates the Near Term Year 2025 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near Term Year 2025 plus Project Traffic Conditions scenario are provided in Appendix H of Appendix I. Table 3.17-6 presents a summary of the Near Term Year 2025 plus Project peak hour LOS at the study intersections, while Table 3.17-7 presents a summary of the Near Term Year 2025 plus Project LOS for the study segments.

Table 3.17-6
Near Term Year 2025 plus Project Intersection LOS Results[7]

ID	Intersection	Intersection Control	AM (5:30 – 6:30) Peak Hour		PM (3:30 – 4:30) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Interstate 5 SB Ramps / Kamm Avenue	One-Way Stop	8.7	A	0.0	A
2	Interstate 5 NB Ramps / Kamm Avenue	One-Way Stop	8.5	A	8.4	A
3	Main Project Access / Kamm Avenue	One-Way Stop	0.0	A	9.9	A
4	State Route 33 / Kamm Avenue	One-Way Stop	10.9	B	10.4	B

Table 3.17-7
Near Term Year 2025 plus Project Segment LOS Results[8]

ID	Segment	Limits	Lanes	24-hour	LOS
1	Kamm Avenue	Interstate 5 and Main Project Access	2	529	B
2	Kamm Avenue	Main Project Access and State Route 33	2	807	B

[7] Traffic Impact Analysis Report for the Kamm Avenue Processing Plant. Prepared by JLB Traffic Engineering, Inc. See Appendix I, page 27.
[8] Ibid.

Cumulative Year 2040 Plus Project Scenario

The Cumulative Year 2040 plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 8 of Appendix I illustrates the Cumulative Year 2040 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2040 plus Project Traffic Conditions scenario are provided in Appendix J of Appendix I. Table 3.17-8 presents a summary of the Cumulative Year 2040 plus Project peak hour LOS at the study intersections, while Table 3.17-9 presents a summary of the Cumulative Year 2040 plus Project LOS for the study segments.

Under this scenario, all study intersections are projected to operate at an acceptable LOS during both peak periods. Similarly, all study segments are projected to operate at an acceptable LOS.

Table 3.17-8
Cumulative Year 2040 Plus Project Intersection LOS Results[9]

ID	Intersection	Intersection Control	AM (5:30 – 6:30) Peak Hour		PM (3:30 – 4:30) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Interstate 5 SB Ramps / Kamm Avenue	One-Way Stop	8.7	A	0.0	A
2	Interstate 5 NB Ramps / Kamm Avenue	One-Way Stop	8.5	A	8.5	A
3	Main Project Access / Kamm Avenue	One-Way Stop	0.0	A	10.0	B
4	State Route 33 / Kamm Avenue	One-Way Stop	12.0	B	11.2	B

Table 3.17-9
Cumulative Year 2040 Plus Project Segment LOS Results[10]

ID	Segment	Limits	Lanes	24-hour	LOS
1	Kamm Avenue	Interstate 5 and Main Project Access	2	664	B
2	Kamm Avenue	Main Project Access and State Route 33	2	942	B

[9] Traffic Impact Analysis Report for the Kamm Avenue Processing Plant. Prepared by JLB Traffic Engineering, Inc. See Appendix I, page 36.
[10] Ibid.

Alternative Methods of Transportation

Fresno County's General Plan includes policies regarding access and the safety standards of roadway facilities, bike facilities, and public transit. Although the General Plan seeks to coordinate multiple forms of transportation, including cars, commercial vehicles, buses, transit, bicycles, and pedestrian traffic, the General Plan does not contain specific policies governing pedestrian traffic. The County also has adopted a Regional Bicycle and Recreational Trails Master Plan[11] that addresses nonmotorized transportation systems and identifies barriers to trails and bikeways.

As discussed in the Environmental Setting, there are no bicycle or pedestrian trails in the immediate vicinity and there is a public transit stop on State Route 33, approximately one-half mile to the east of the proposed Project. The proposed project would not conflict with adopted polices, plans, and programs supporting alternative transportation. As described above, Project-generated activities would not generate a traffic volume that would significantly affect traffic flow on area roadways. The performance of public transit, bicycle, and pedestrian facilities in the area likewise would not be adversely affected, and the impact on plans, ordinances, and policies, would be ***less than significant.***

Mitigation Measure

None are required.

Impact 3.17-2: *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Less Than Significant Impact with Mitigation. The State of California Governor's Office of Planning and Research (OPR) published a Technical Advisory (TA) on *Evaluating Transportation Impacts in CEQA* (December 2018) to provide advice and recommendations, which agencies and other entities may use at their discretion. The TA acknowledges that lead agencies should set criteria and thresholds for VMT and transportation impacts. However, it provides guidance to residential, office and retail uses, citing these as the most common land uses. Beyond these three land uses, there is no guidance provided for any other land use type. In other words, the TA does

[11] Fresno County Regional Bicycle and Recreational Trails Master Plan. Adopted September 2013. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/design-division/bicycle-master-plan. Accessed November 2020.

not establish any presumptive thresholds or analytical methods for assessing VMT in relation to agricultural projects and operations. The TA also notes that land uses may have a less than significant impact if located within low VMT areas of a region and suggests that screening maps be used for this determination. As of the date of this analysis, the County of Fresno had not finalized its VMT guidelines. In addition, those that were prepared by Fresno COG for the County's consideration have not been approved by the County. As a result, the VMT analysis presented in this analysis was performed pursuant to the TA.

VMT is simply the product of a number of trips and those trips' lengths. The first step in a VMT analysis is to establish the baseline average VMT, which requires the definition of a region. The Fresno COG Draft SB 743 Implementation Regional Guidelines were available for use at the time of the preparation of this Report. Per Fresno COG Guidelines, VMT for the region defined by the Fresno County border which includes all its incorporated cities is 25.60 average VMT per employee. The OPR TA recommends a 15 percent reduction in average VMT for residential and commercial facilities, but do not include a recommendation for agricultural facilities. The TA likewise recommends a countywide averaging approach for VMT that includes transit-served incorporated areas in the county average, but also provides broad flexibility for local jurisdictions to tailor VMT assessment methodologies to the particular attributes of their communities. In San Bernardino County, for example, the Board of Supervisors directed that the average VMT from incorporated cities be excluded from VMT averages for purposes of assessing VMT in projects proposed in unincorporated areas so as to more accurately disclose actual VMT from unincorporated county areas. OPR's Director has also acknowledged that more work is required to understand and apply VMT in rural counties. Because OPR's recommended VMT thresholds and methodologies do not include recommendations for agricultural processing facilities in rural locations, the County has the flexibility to set or apply its own VMT thresholds of significance for the project and the project location.

Based on the Fresno COG activity-based model (ABM), the Project is located within Traffic Analysis Zone 2270. The ABM is a travel demand model used to evaluate transportation impacts of a project and provides the total VMT generated by a project. The ABM was developed by Fresno COG to meet existing and evolving transportation planning needs across multiple jurisdictions[12]. Per the Fresno COG VMT Screening Application, the average VMT per employee for TAZ 2270 is 41.67. In this case, the 15 percent VMT reduction threshold is 35.41 VMT per employee. For purposes of this analysis, VMT of the proposed Project was determined using the

[12] https://www.fresnocog.org/wp-content/uploads/2017/06/Fresno-COG-ABM-Report.pdf. Accessed February 2021.

Fresno COG ABM. Based on Fresno COG ABM output, the Project will produce a 36.6 average (tour-based) VMT per employee (prior to accounting for carpooling).

The Project is located in a rural agricultural area of Fresno County. Employees of agricultural production facilities in Fresno County generally operate single-occupancy vehicles or carpool to work. For instance, approximately one-third of year-round employees who work in agriculture carpool and approximately one-half to two-thirds of seasonal employees who work in agriculture carpool during the peak harvest season. This is largely due to temporary employment of an additional member of the same household or neighborhood during the harvest season. Carpooling is a cost-effective, readily-available, and demonstrated VMT reduction method for employees. To assure adequate VMT reduction is achieved by the Project, a mitigation measure to require the Project Applicant to incentivize employee carpooling with preferred parking locations and encourage carpooling by helping to match willing carpool drivers with riders from the same neighborhoods is recommended.

The purpose of SB 743 is to reduce VMT and GHG emissions. As discussed in the Project Description, the proposed Project would serve the immediate vicinity of existing pistachio orchards that currently ship crops for processing to more remote locations. The pistachios from local orchards that would be processed by the Project have been and continue to be transported to more distant processing plants, including one in Firebaugh over 21 miles away. As a result, the proposed Project will reduce heavy-duty VMT and GHG emissions during harvest season. These heavy-duty VMT and GHG emissions reductions will help offset VMT and GHG emissions from light-duty VMT of Project employees. Worthy of note is that the analysis methodology used in the TIA assumes no carpool/vanpool/rideshare program activity. Considering employee carpool/vanpool/rideshare participation rates of pistachio facilities in the region (including facilities approved and operating in Fresno County) are known to be substantial, the implementation of a carpool/vanpool/rideshare program would likely also reduce VMT estimates of the Fresno COG ABM. As such, incorporation of Mitigation Measure TRA-1 will reduce Project related VMT to ***less than significant*** levels.

Mitigation Measures:

TRA-1 The Project Applicant shall implement a carpool/vanpool/rideshare program and establish and maintain at least a 23 percent employee participation to reduce VMT by more than 15% below the existing average of 41.67 VMT for the proposed Project.

Impact 3.17-3: *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact. Construction of the proposed Project would require the delivery of heavy construction equipment and facility materials, some of which may require transport by oversize vehicles. The use of oversize vehicles during construction can create a hazard to the public by limiting motorist views on roadways and by the obstruction of space. Construction-related oversize vehicle loads must comply with permit-related and other requirements of the California Vehicle Code and the California Streets and Highway Code. California Highway Patrol escorts may be required at the discretion of Caltrans and the County and would be detailed in respective oversize load permits. Due to the rural nature of the area roads and flat terrain, construction vehicles are not anticipated to incur hazards traveling to and from the Project site. Furthermore, the proposed Project would not include a design feature or use vehicles with incompatible uses that would create a hazard on the roadways surrounding the Project site. Any impacts would be ***less than significant.***

Mitigation Measures

None are required.

Impact 3.17-4: *Result in inadequate emergency access?*

Less Than Significant Impact. The proposed Project would be located in a rural area with multiple access roads allowing adequate egress and ingress to the facility in the event of an emergency. Additionally, as part of the proposed Project, internal access roadway improvements would be made. Therefore, the proposed Project would allow for adequate emergency access. There is a ***less than significant impact.***

Mitigation Measures

None are required.

3.18 Tribal Cultural Resources

This section of the DEIR evaluates the potential impacts to Tribal Cultural Resources (TCRs) associated with Project implementation. A Cultural Resources Survey was prepared for the Project and is the basis for analysis for the discussion herein (see Appendix C). In addition, the County of Fresno notified applicable Tribes to request consultation on the Project, if desired. No NOP comments were received pertaining to Tribal Cultural Resources.

Environmental Setting

The study area is situated in the San Joaquin Valley, 2.67 mile east of the foot slopes of the Ciervo Hills. The immediate study area has been heavily disturbed and was formerly used for agriculture. Prior to its current developmen,t the project area would have been typical arid California Prairie, dominated by sparse perennial bunch grasses such as Purple Needle Grass, Nassella pulchra, and during years of optimum precipitation, annual forbes such as California Poppy. The study area is located approximately 2.4 miles north of Hondo Creek, 7 miles north of Cantua Creek and 14 miles south of Panoche Creek, the only reliable water sources in the area. Given its distance from any water source, Native American occupation of the immediate study area is highly unlikely within the discernable past.[1]

<u>Ethnography and Ethnohistory</u>

The indigenous people of the San Joaquin Valley and its bordering foothills of the Sierra and Diablo Ranges are speakers of Yokutsan languages from the Penutian language family. The word yokuts or *yokotch* translates as people in most of the Yokutsan dialects and has been attached to the many groups that speak this language as a Tribal appellation by early anthropologists working in the region. The majority of Yokuts lived along rivers, seasonal streams and permanent springs on the more well-watered eastern side of the San Joaquin Valley, around the shores of historic Tulare Lake and along the braids of the San Joaquin River as it flowed north from the big bend of the river near what is now Mendota. Valley lands between water courses usually lacked resources necessary for settlements. Lieutenant George H. Derby, US Topographical Engineers, noted during his reconnaissance survey of the San Joaquin (Tulare) Valley in April and May of 1850 that "The Tulare valley, from the mouth of the Mariposa to the Tejonpass at its head, is about one hundred and twenty mile in extent, and varies from eight to one hundred miles in width. With the exception of a strip of fertile land upon the rivers emptying into the (Tulare) lake from

[1] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 5.

the east, it is little better than a desert. The soil is generally dry, decomposed and incapable of cultivation, and the vegetation, consisting of Artemisias [sic] and wild sage, is extremely sparse."[2] The study area does not fall within any immediate known Tribal areas but is closest to the Village sites of the *Pitkachi* about 18 miles to the NINE.[3] The *Pitkachi*, a Tribe of the San Joaquin River Yokuts group of the Foothill Yokuts division, occupied the area south of the San Joaquin in between Mendota and Herndon in present day Fresno. Known ethnographic villages located in this area include *Kohuou*, near Herndon, *Weshiu* on a slough west of *Kohuou*, and *Gewachiu* NE of Mendota. The *Pitkachi* were said to be named after a salt or alkali that was "evil-smelling".[4]

Yokuts occupants of the San Joaquin Valley and adjoining Sierran foothills were hunters and gatherers who depended upon the seasonal vegetal and faunal resources. Similar to their neighboring Tribes, the *Pitkachi* lived in permanently established villages during most of the year, usually between the months of October and May. The rest of the year, they would travel across their territory, tracking seasonally available plants as well as game and fish. Their principal villages were located along permanent springs, sloughs, and streams, while temporary camps were scattered throughout their area along seasonal drainages. Pounding rocks, the most visible vestige of Native American occupation, are located on rock boulders and bedrock outcrops above seasonal or permanent water courses, but are rarely found on the valley floor. River cobble mortars or wooden mortars on fallen tree logs were more commonly used in this area. The abundance of resources in the valley supported a socially complex lifestyle, with the high population numbers normally associated with agricultural peoples.[5]

To the West of the subject property, lay El Camino Viejo A Los Angeles, (El Camino Viejo, the "Old Road"). This caretta (ox cart) road is one of the oldest trails in present day California, parts of which are still travelled on today. El Camino Viejo started from San Pedro Bay, passed Los Angeles, Mission San Fernando, Cuddy Valley and entered the San Joaquin Valley at San Emidio Creek in Kem County. The road skirted the valley along the Coastal Ranges ending at San Francisco Bay near present day Oakland. The trail came as close as 1.12 miles SW of the SW comer of the subject property between the old watering holes on Arroyo Hondo to the south and Arroyo de Panoche Grande to the NW. El Camino Viejo was used as early as the late 1700s and became a prominent trail by the 1820s.[6]

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[2] A Cultural Resources Survey of 475.76 Acres for the Kamm Avenue Pistachio Processing. Prepared by Table Mountain Rancheria. See Appendix C, page 6.
[3] Ibid.
[4] Ibid.
[5] Ibid. Page 7.
[6] Ibid. Page 7.

Regulatory Setting

State of California Regulations

Assembly Bill (AB) 52

AB 52, which was approved in September 2014 and became effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if requested by the tribe. A provision of the bill, chaptered in CEQA Section 21086.21, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or

    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

a. A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

b. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

Methodology. According to AB 52, it is the responsibility of the tribes to formally request of a lead agency that they be notified of projects in the lead agency's jurisdiction so that they may request consultation related to TCRs. Nevertheless, the County of Fresno proactively sent out letters to tribes identified by the Native American Heritage Commission.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

    i. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1j(k) or

    ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria det forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impacts and Mitigation Measures

Impact 3.18-1: *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant. As previously discussed, the County of Fresno sent out letters to the following tribes notifying them of the proposed Project and requesting consultation, if desired:

- Santa Rosa Rancheria Tachi Yokut Tribe
- Picayune Rancheria of the Chukchansi Indians
- Dumna Wo Wah Tribal Government
- Table Mountain Rancheria

According to AB 52, the tribes had 30 days from the receipt of the letter to request consultation with Fresno County. None of the Tribes requested consultation.

As previously discussed in Chapter 3.5 – Cultural Resources, the SOI is not known to contain any TCRs. As further noted in that chapter, with respect to archaeological resources and human remains that may be present in areas where there would be some ground disturbance, mitigation measures set forth in the section would be implemented to ensure that should resources be encountered, they would be protected from damage. Therefore, while no TCRs are expected to be affected by the proposed Project, the mitigation measures set forth in Chapter 3.5 - Cultural Resources, would further ensure that any resources encountered would not be adversely affected.

Based on the above, the proposed Project is not expected to result in a substantial adverse change in the significance of TCRs, and this impact is considered ***less than significant***.

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The scope for considering cumulative impacts to tribal cultural resources are the geographic areas in Fresno County as well as the areas designated by the Native American Heritage Commission as having potential to impact TCRs as a result of the Project. As discussed above, the proposed Project area is not known to contain any TRCs; however, mitigation is included to reduce any potential impacts to Tribal Resources. As such, cumulative impacts are considered ***less than cumulatively considerable***.

3.19 Utilities

This section of the DEIR identifies potential impacts of the proposed Project pertaining to water supply and infrastructure, wastewater service, solid waste and other utility services. To assist in evaluation of this environmental impact, a Hydrology and Water Quality Analysis (Appendix F) and Water Supply Analysis (Appendix G) were prepared. No NOP comment letters were received pertaining to this topic.

Environmental Setting

The Project site is designated as Exclusive Agriculture in the Fresno County General Plan and zoned AE-20, Exclusive Agriculture, 20-acre minimum required. The parcels have not been used for commercial agricultural purposes since before they were acquired in 2011. Historical records indicate that that the northern parcel, APN 038-300-17S, has not been used for agriculture since at least 2009. The southern parcel, APN 038-300-30S, has not been used for agriculture since 2006. The westerly parcel, APN 038-300-14S, portions of which would be used for pistachio shell and other non-hulling processing materials disposal, has not been used for agriculture since 2006.

Existing land uses surrounding the Project site consist of agricultural land, including thousands of acres of pistachio orchards owned and operated by affiliated entities that would be served by the proposed processing facilities. Approximately 320 acres of non-irrigated agricultural land is located to the west of the site (APN 038-300-14S). The FMMP map for the County identifies areas to the north, east and west as prime agricultural land, most of which is planted with pistachio trees. A solar power generation facility is located approximately 2 miles northeast of the site. Residential and related commercial land uses are located in Three Rocks, approximately 1.5 miles southeast of the main Project processing facilities.

Water Supply

Surface water for the Project area is provided by the Westlands Water District (WWD) which contracts with the federal Central Valley Project (CVP) for most of its water supply. The site is currently fallow and uses no CVP water. The CVP is a water storage and distribution system operated by the U.S. Bureau of Reclamation (USBR). WWD has annual contracts for approximately 1,500,000 acre-feet of water for environmental, irrigation, and municipal and industrial uses. WWD distributes water from the CVP to farms and municipalities on a prioritized basis. WWD's regulations define the full allocation of agricultural water within its district. The California Aqueduct is located approximately 1 mile north. A water pipeline extends from an existing turnout in the Aqueduct along the eastern border of the site. A metered connection will

be installed on the pipeline to provide water for the Project. The Project will not utilize groundwater.

Solid Waste

The Project will be served by Mid Valley Disposal, a private disposal service to collect and convey recycled and other waste generated from daily operations. The nearest Mid Valley Disposal facility is located approximately 30 miles northeast of the Project site at 15300 W. Jensen Ave., Kerman, CA 93630. Dewatered hulling residue will be conveyed offsite for beneficial reuse, primarily to dairies. Other processing solids, such as shells and precleaning materials will be marketed for beneficial reuse, and any such solids that cannot be reused will be shredded and disked into the unused portions of the 315-acre Project site and the 160-acre adjacent solid management site.

Utilities

The Project will be supplied with natural gas and electrical power by PG&E. Natural gas service will be extended by installing a pipeline from existing distribution facilities to the west of the site, including along Kamm Avenue or from other points along the existing distribution pipeline to the south that would extend east to the Project site on land owned by entities affiliated with the Project applicant. An existing electrical power line extends from the Giffen Substation operated by PG&E east to State Route 33, south to Kamm Avenue, and east along the northern border of the site. Trucks would be used to provide liquified natural gas for Project use in the first year of operations. The Project would contract with commercial electrical power generation providers to provide onsite generation capacity to meet peak electricity demand, including during the harvest period, until the transmission line improvements are completed.

Regulatory Setting

Federal Agencies and Regulations

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA applies to every public water system in the United States but does not regulate private wells which serve fewer than 25 individuals.

The SDWA authorizes the United States Environmental Protection Agency (EPA) to set national health- based standards for drinking water to protect against both naturally-occurring and manmade contaminants that may be found in drinking water. Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments changed the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach is intended to ensure the quality of drinking water by protecting it from source to tap.

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either EPA or an authorized state/tribe, contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. (EPA has authorized 40 states to administer the NPDES program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge.

General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. Here, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (non-domestic) users. The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement pretreatment standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than a state, a tribe or the EPA.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the EPA to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

<u>State Agencies and Regulations</u>

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the State Water Resources Control Board to establish water quality

principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water.

State Water Resources Control Board

Created by the State Legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters. SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). The Planning Area is located within a portion of the state that is regulated by the Central Valley RWQCB.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of the Urban Water Management Plans as well as how urban water suppliers should adopt and implement the plans. It is the intention of the act to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

Senate Bill (SB) 610

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 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 obtain a water supply assessment from a public water system as specified in the law. For more information, please see Section 3.10, Hydrology and Water Quality.

Assembly Bill (AB) 901

AB 901 requires Urban Water Management Plans to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply.

Senate Bill (SB) 221

SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if groundwater is to be used for the project, must be substantiated.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, 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 are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000, and beyond. Solid waste plans are required to explain how each city's AB 939 plan will be integrated with the respective county plan. They must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

<u>Regional</u>

Regional Water Quality Control Board, Central Valley Region

The Central Valley RWQCB provides planning, monitoring, and enforcement techniques for surface and ground water quality in the Central Valley region, including the City of Tehachapi. The primary duty of the RWQCB is to protect the quality of the waters within the region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges.

Water Reuse Requirements (Permits)

The Central Valley RWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established by DPH in Title 22. The Central Valley RWQCB may also incorporate requirements into the permit in addition to those specified in Title 22. These typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

Waste 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.

<u>Local Regulations</u>

Fresno County General Plan

The Fresno County General Plan Public Facilities and Services Element (County 2000b) contains the following policies related to utilities and service systems that are relevant to the proposed project:

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.

Policy LU-C.8 Fresno County shall take into consideration the presence of the regulatory floodway or other designated floodway, the FEMA-designated 100-year floodplain, estimated 250-year floodplain, the Standard Project Flood, and the FMFCD Riverine Floodplain Policy in determining the location of future development within the San Joaquin River Parkway area. Any development sited in a designated 100-year floodplain shall comply with regulatory requirements at a minimum and with the FMFCD Riverine Floodplain Policy criteria, or requirements of other agencies having jurisdiction, where applicable.

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.25 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.

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.
Policy OS-A.29	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.
Policy PF-A.2	The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.
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.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- Result in a determination by the wastewater treatment provider 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?
- 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?
- 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?

Impacts and Mitigation Measures

Impact 3.19-1: *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less Than Significant Impact With Mitigation. The Project will require that utilities be extended to serve the proposed development, including water, electric power, natural gas and telecommunications facilities. Stormwater will be collected on-site and directed to a basin at the northeast corner of the site. A septic system will be installed within the site to support restroom facilities and sewage needs of the Project. Extension or construction of utilities will be the responsibility of the Project Applicant. The improvements required to tie into existing utilities are included in the Project Description and the environmental impacts of extending these utilities are analyzed within this EIR under applicable CEQA Appendix G topics. Numerous mitigation measures have been included throughout this document which are applicable to these activities. Individual utilities are discussed below.

Wastewater / Sewer

The proposed Project would install five septic systems for employee waste. The installation of a septic system is regulated and monitored by the Fresno County Department of Public Works and Planning (FCPWP). FCPWP's *Onsite Wastewater Treatment System Guidance Manual* (Manual) provides the procedural and technical details for implementation of the provisions of the Fresno Local Agency Management Plan (LAMP) codified in Chapter 15.20 of the Fresno County General Ordinance Code. The provisions within the 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, include Onsite Wastewater Treatment Systems as defined by the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (State OWTS Policy), adopted by the SWRCB, and which took effect on May 13, 2013. The Fresno County Department of Public Works and Planning, Development Services and Capital Projects Division, (Department), is the agency responsible for the enforcement of the Ordinance and provisions in the Manual. The Central Valley RWQCB is the state agency responsible for the protection of groundwater and surface water quality in Fresno County. While the Department administers the local program, the Central Valley RWQCB retains the authority to issue a WDR for any discharge of wastewater that may affect water quality.

Upon submission of an application to install a septic system, FCPWP requires that soil profiles and percolation tests be performed. The final design will be based on the percolation testing results, ensuring that the soils at the proposed Project site will support the use of the septic systems. By complying with existing FCPWP regulations/permit requirements through Project design features, the impact is considered ***less than significant.***

Stormwater

As discussed in Section 3.10 (Hydrology and Water Quality) and the discussion under Impact 3.10-1 and Impact 3.10-3, the proposed Project would result in new impervious areas associated with site improvements and would therefore require new stormwater drainage facilities. Although the site will increase the rate and amount of surface runoff, all stormwater runoff from the constructed Project facilities will be directed to a new stormwater retention basin to be constructed in the northeast corner of the northerly 80 acre site. Water retained in the basin will evaporate or be absorbed in the upper portions of the underlying soil formations and have no contact with local groundwater, which occurs at a depth of approximately 450 feet. An estimated 21 AFY of stormwater runoff is expected to be generated by the Project's proposed impervious and pervious improvements, thus requiring a basin retention volume storage of approximately

21 acre-ft. The basin will provide two feet of freeboard above the highest estimated elevation of water in the basin. The depth of the basin will be such that highest water elevation of water will not be above surrounding surface grade. The design of the basin, including inside and outside side slopes, will conform to County requirements and will not increase flood conditions on- or off-site outside the basin. Refer to Section 3.10 and the discussion under Impact 3.10-1 and Impact 3.10-3 for the full evaluation of the proposed on-site stormwater facilities. The impact is ***less than significant***.

Water Supply

Refer to Section 3.19-2 below and Section 3.10 (Hydrology and Water Quality) and the discussion under Impact 3.10-2 for the full evaluation of Project water supply requirements. Project water would be supplied by the WWD from existing conveyance facilities that extend from the California Aqueduct to a pipeline traversing the east side of the Project area (See Figure 3.10-1). The Project will contract with affiliated growers in the vicinity to obtain sufficient water supplies to operate the processing plant during average, dry and multiple year drought conditions. The Project will also contract with a participant in an existing water banking program for the use of stored CVP water if required during exceptionally dry periods. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local pistachio growers for irrigation. Consequently, the Project will not significantly affect the net supply of water for pistachio irrigation in the region. No groundwater would be used for this Project. Therefore, the impact is ***less than significant.***

Other Utilities

The Project will be supplied with natural gas and electrical power by PG&E. Natural gas service will be extended by installing a steel pipeline operating at transmission pressure of at least 60 pound per square inch gauge (psig) from PG&E's existing gas transmission line 300B, approximately 3 miles west of the Project site on land owned by entities affiliated with the Project applicant (see Figure 2-5). Trucks would be used to provide liquified natural gas for Project use in the first year of operations.

Electrical power would be provided by connecting with an existing powerline located on the north side of Kamm Avenue near the northern border of the Project site. The power line extends from a PG&E substation (Giffen substation) to the east (see Figure 2-5). The existing PG&E overhead transmission line will be upgraded and voltage regulation equipment will be installed between the Giffen substation and the Project site to meet Project and other anticipated electrical demand in the region. Improvements to the transmission line (shown in Figure 2-5) and the

voltage regulation equipment are evaluated in this EIR. To serve the Project, PG&E could potentially transfer electrical power from other substations to the Giffen substation depending on Project-related electrical requirements and other electrical needs in the area. The provision of electrical power for the Project will require minor improvements to the Giffen substation, including installation of a new transformer and related equipment, which are anticipated to disturb less than 1 acre of land. The Project would contract with commercial electrical power generation providers to provide onsite generation capacity to meet peak electricity demand, including during the harvest period, until the transmission line improvements are completed.

Mitigation Measures: The mitigation measures throughout this document are also applicable to the on-site improvements associated with installation of adequate utilities. Please refer to the mitigation monitoring and reporting program for the full list of applicable mitigation.

Impact 3.19-2: *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less Than Significant. Refer to Section 3.10 (Hydrology and Water Quality) and the discussion under Impact 3.10-2 for the full evaluation of Project water supply requirements and impacts.

A Water Supply Analysis (Appendix G) was prepared to evaluate Project-related water requirements and associated environmental impacts. Project water would be supplied by the WWD from existing conveyance facilities that extend from the California Aqueduct to a pipeline traversing the east side of the Project area (See Figure 3.10-1). The Project will contract with affiliated growers in the vicinity to obtain sufficient water supplies to operate the processing plant during average, dry and multiple year drought conditions. The Project will also contract with a participant in an existing water banking program for the use of stored CVP water if required during exceptionally dry periods. Approximately 80 to 90 percent of all water used by the Project will be recaptured, cleaned, and used by local pistachio growers for irrigation. No groundwater would be used for this Project. All process and domestic use water would be surface supplies delivered from the California Aqueduct via pipeline to the site.

Most of the Project's water demand will occur during the 6-week harvest period and be used in the hulling process using process water. Hulling operations would require up to 1.8 million gallons (5.5 acre-feet) per day. This is the maximum amount of water that would be used daily during the harvest period, however, the maximum amount will not be needed every day during the harvest period and will fluctuate downward on some days. The Project will use a total of 64.9 million gallons of process water (199.3 acre-feet) for hulling per harvest each year. The huller tank

will also maintain a supply of 100,000 gallons of process water (0.3 acre-feet) for fire suppression purposes in accordance with Fresno County Fire Department requirements. Approximately 350,400 gallons (1.07 acre-feet) per year of process water from the huller tank would be also be used for onsite irrigation. Total Project process water demand will be approximately 65.4 million gallons (200.7 acre-feet) per year. During the non-harvest season, process water will only be used for on-site irrigation and fire suppression purposes.

Domestic water will be used for process equipment washing, which will occur 60 times per year. Process equipment washing will require 2,125,000 gallons (6.5 acre-feet) of domestic water per year. Bins used to store work in progress product will be washed 4 times per year, and each silo will be washed once per year. These activities will require approximately 285,00 gallons (0.9 acre-feet) of domestic water per year. Employee consumption will require approximately 315,000 gallons (1.09 acre-feet) of domestic water per year.

Table 3.10-4 summarizes the Project's total annual process and domestic water demand by primary use. The Project will require a total of approximately 68.1 million gallons (209 acre-feet) per year.

The Project land and pistachio orchards owned and operated by affiliated entities in the vicinity of the Project are within the WWD service area. All of these lands have an annual allocation per acre of surface water imported by WWD through the federal Central Valley Project. WWD surface water used in the Project region is conveyed through turnouts located along the California Aqueduct to distribution pipelines that deliver the water to local distribution facilities for pistachio orchard irrigation. An existing 34-inch water distribution pipeline is located along the eastern border of the site and extends to existing turnout facilities in the Aqueduct. The Project will install connection and metering equipment on the existing pipeline to deliver water supplies necessary to operate the processing plant (see Figure 3.10-1).

Surface water supplies in California, including the surface water provided to users in the Project region by WWD, are subject to variability due to hydrologic conditions and regulatory requirements. The Project will contract with affiliated entities that have surface water allocations from WWD for 2,556 acres of irrigated land as identified in Figure 3.10-2 and Table 3.10-3. These allocations include rights to use certain drier year water supplies, such as stored "carryover" water. The Project will purchase water from the contracting growers to meet demand, and WWD will supply the water in accordance with an approved municipal and industrial (M&I) account for the Project. The Project will also contract with a participant in the existing Semitropic Water Bank to use currently stored Central Valley Project water to supplement Project water supplies if necessary during exceptionally dry periods. As previously indicated, no groundwater would be

used for this Project. All process and domestic use water would be surface supplies delivered from the California Aqueduct via pipeline to the site.

Based on information from similar processing facilities, approximately 80 to 90 percent of all water supplied to the Project will be captured, cleaned and distributed as irrigation reuse water in the vicinity of the Project. Consequently, the Project will not significantly affect the net supply of water for pistachio irrigation in the region. Therefore, the Project will have ***less than significant impacts*** to water supplies.

Mitigation Measures

None are required.

Impact 3.19-3: *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less Than Significant. There are no wastewater treatment providers in the Project area that could provide wastewater services/connection to the Project. Therefore, the proposed Project would install five septic systems for employee waste. The installation of a septic system is regulated and monitored by the Fresno County Department of Public Works and Planning (FCPWP). FCPWP's *Onsite Wastewater Treatment System Guidance Manual* (Manual) provides the procedural and technical details for implementation of the provisions of the Fresno Local Agency Management Plan (LAMP) codified in Chapter 15.20 of the Fresno County General Ordinance Code. The provisions within the 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, include Onsite Wastewater Treatment Systems as defined by the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (State OWTS Policy), adopted by the State Water Resources Control Board, and which took effect on May 13, 2013. The Fresno County Department of Public Works and Planning, Development Services and Capital Projects Division, (Department), is the agency responsible for the enforcement of the Ordinance and provisions in the Manual. The Central Valley RWQCB is the state agency responsible for the protection of groundwater and surface water quality in Fresno County. While the Department administers the local program, the Central Valley RWQCB retains the authority to issue a WDR for any discharge of wastewater that may affect water quality.

Upon submission of an application to install a septic system, FCPWP requires that soil profiles and percolation tests be performed. The final design will be based off the percolation testing results, ensuring that the soils at the proposed Project site will support the use of the septic systems. By complying with existing FCPWP regulations/permit requirements through Project design features, the impact is considered ***less than significant.***

Mitigation Measures

None are required.

Impact 3.19-4: *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less Than Significant. Organic solids will be produced from Project operations, primarily during the harvest period. These materials include pretreatment twigs, stems and other solids extracted prior to hulling, dewatered hull material, and pistachio shell blanks (see Table 3.19-1). Organic materials will also be generated by periodic cleaning of the process water settlement and cleaning ponds. Project operations, such as employee food consumption and paper and packaging material use, will generate organic and inorganic solid wastes which will be recycled to the extent feasible.

Table 3.19-1
Solid Materials Produced by the Project, Pounds per Year

	Pounds
Precleaning solids	5,015,772
Pistachio shell blanks (from hulling and processing operations)	6,000,000
Dewatered hull residue (12% moisture content)	13,064,654

The Project will market solids generated by the facility for beneficial reuse as soil amendments, cement filler (e.g., pistachio blanks), livestock feed, or mulch. The dewatered hull residue will be conveyed offsite for beneficial reuse, primarily in dairies. The beneficial reuse of other solids is subject to demand variability based on the market conditions that occur in each year. Precleaning and shell solids that are not beneficially reused will be conveyed to an adjacent solid materials management site or to unused portions of the 315-acre main facility site, shredded and/or dried,

and disked into the soil (see Figure 2-9). The site will be operated in accordance with all applicable laws, regulations, and permit requirements. The Project will be served by Mid Valley Disposal, a private disposal service to collect and convey recycled and other waste generated from daily operations. The nearest Mid Valley Disposal facility is located approximately 30 miles northeast of the Project site at 15300 W. Jensen Ave., Kerman, CA 93630. The American Avenue Disposal Site is located at 18950 W. American Avenue in Kerman, CA 93630.

Project Construction

Construction of the proposed Project would generate solid waste (in the form of construction debris) that would need to be disposed of at area landfills. Construction debris includes concrete, asphalt, wood, drywall, metals, and other miscellaneous and composite materials. Much of this material would be recycled and salvaged to the maximum extent feasible. Materials not recycled would be disposed of at local landfills. The Project site is currently undeveloped. There would not be any demolition and most of the solid waste generated by the construction phase of the proposed Project would be recycled in accordance with AB 939.

Site preparation (e.g. grading activities) and construction activities would generate construction debris, including wood, paper, glass, plastic, metals, cardboard, and green wastes. Construction activities could also generate hazardous waste products. The wastes generated would result in an incremental and intermittent increase in solid waste disposal at the Mid Valley Disposal Facility near Kerman, CA. However, compliance with Federal, State, and local statutes or regulations would result in a ***less than significant*** impact.

Project Operation

Outside of the organic solids produced by the Project, the Project will also produce typical commercial solid waste from normal operations. The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. The amount of solid waste generated by the proposed Project is not expected to exceed existing landfill capacity. The American Avenue Landfill is permitted to receive 2,200 tons of waste per day and is expected to reach its permitted capacity in 2031. Based on the anticipated landfill capacity, sufficient capacity would be available to handle disposal of nonrecyclable waste generated by the Project during operation of the Project.

Throughout the Project's lifespan, in order to comply with the California Integrated Waste Management Act, the County would continue to be required to demonstrate on a 5-year reporting cycle that it has at least 15 years of remaining landfill capacity available within the County and

that waste is minimized through recycling and other diversion methods. Accordingly, the impact would be ***less than significant***.

Mitigation Measures: None are required.

Impact 3.19-5: *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Less Than Significant. See Response to Impact 3.19-4. The Project will comply with all federal, state and local statutes and regulations related to solid waste. Therefore, the impact is considered ***less than significant.***

Mitigation Measures: None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. 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 Project-level analysis determined impacts related to water supply were less than significant. The Project would not utilize groundwater. As discussed in detail in Section 3.10, Hydrology and Water Quality, Project operations will not significantly affect the implementation of the Westside Subbasin Groundwater Sustainability Plan and the achievement of the California Sustainable Groundwater Management Act requirements. Approximately 80 to 90 percent of all Project water supplied by local growers will be returned for irrigation reuse on the same land where the growers operate 2,556 irrigable acres of pistachios. Irrigation reuse water supplied for Project pistachio processing will maintain existing patterns of surface water application in the vicinity of the Project, comply with all applicable water quality standards and requirements, and have no significant project-level and cumulative impacts to the volume of groundwater recharge or water quality in the Westside Subbasin.

The geographic scope for considering Project-related cumulative impacts on other utilities is Fresno County. Development of the Project in combination with future agricultural and/or development projects in the area would increase the utilization of utilities such as electrical power, natural gas, and solid waste disposal facilities. The Project does not result in significant impacts to these utilities and thus will not contribute to a significant cumulative impact. Therefore, the Project's utility impacts are ***less than cumulatively considerable.***

3.20 Wildfire

This section of the DEIR addresses the potential for the proposed Project to exacerbate wildfire risks. Additionally, the potential impacts related to exposure to wildfire, including smoke and subsequent flooding and runoff, are assessed in this section.

Environmental Setting

A wildfire is an uncontrolled fire in an area of combustible vegetation that is generally extensive in size. Wildfires differ from other fires in that they take place outdoors in areas of grassland, woodlands, brush land, scrubland, peatland, and other wooded areas that act as a source of fuel, or combustible material. Buildings may become involved if a wildfire spreads to adjacent communities. The primary factors that increase an area's susceptibility to wildfire include topography, fuel (vegetation type), and weather.[1] These factors, as they exist and occur relative to the Project area are described below.

- **Topography**. According to the U.S Forest Service, fires burn faster uphill than downhill because the fuels above the fire are brought into closer contact with upward moving flames. The steeper the slope, the faster the fire burns. Additionally, steep slopes may hinder firefighting efforts. Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. The proposed Project is located on the Valley floor in Fresno County and topography in the area is nearly flat.

- **Fuel.** Fuel is any combustible material. Wildland fuels are live and/or dead plant material. These vary from one area of the country to another within the ecosystem; however, they are grouped into four major types based on the primary fuel that carries the fire. These are grasses, shrubs, timber litter and logging slash. Timber litter and logging slash are exclusively associated with forested areas, while grasses and shrubs are found in most ecosystems.
- **Weather.** Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility. Fire moves more quickly under hot, dry, and windy conditions. Wind may also blow burning embers ahead of a fire, causing its spread. Drought conditions also lead to extended periods of excessively dry vegetation, increasing

[1] U.S. Forest Service. Fire Management Study Unit. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsm9_028958.pdf. Accessed October 2020.

the fuel load and ignition potential. According to the Western Regional Climate Center, average annual precipitation in the western portion of Fresno County is between 5-10 inches.[2] Generally, in an average or typical year, most precipitation is received from October through April. May through September is the driest parts of the year and coincide with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters and fires during the autumn, winter, and spring months are become more common. Prevailing winds in the Project area are generally westerly to southwesterly.[3] Westerly to southwesterly prevailing wind means that winds generally move across the City from the west to the east.

Wildfire Hazards

In California, responsibility for wildfire prevention and suppression is shared by federal, state and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA). While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones. CAL FIRE maps three zones on SRA: 1) Moderate Fire Hazard Severity Zones; 2) High Fire Hazard Severity Zones; and 3) Very High Fire Hazard Severity Zones. Only the Very High Fire Hazard Severity Zones are mapped on for LRA. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas. According to LRA mapping, no land within Fresno County is

[2] Western Regional Climate Center. PRISM Precipitation & Dew Point Climatology Maps. Average Annual Precipitation, California. https://wrcc.dri.edu/Climate/prism_precip_maps.php. Accessed October 2020.
[3] California Air Resources Board, Aerometric Data Division. California Surface Wild Climatology. 1984. https://ww3.arb.ca.gov/research/apr/reports/l013.pdf. Accessed October 2020.

designated as a Very High Fire Hazard Severity Zone.[4] Additionally, according to CAL FIRE, the nearest SRA mapped land is on the east side of Interstate 5, approximately 3.75 miles to the southwest of the site at its nearest point.[5]

Regulatory Setting

Federal Regulations

The Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance. There are two different levels of State disaster plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act has also established new requirements for local mitigation plans.

National Fire Plan

The National Fire Plan was developed under Executive Order 11246 in August 2000, following a historic wildland fire season. Its intent is to establish plans for active response to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

State of California Regulations

The California Fire Plan

The Strategic Fire Plan for California is the State's road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018 and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan. In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of the 21 CAL FIRE units and six contract counties. The plans include stakeholder contributions and priorities and identify

[4] California State Geoportal. California Fire Hazard Severity Zone Viewer. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414. Accessed October 2020.
[5] California Department of Forestry and Fire Protection. Fire Hazard Severity Zones Maps. Fresno County. https://osfm.fire.ca.gov/media/6449/fhszs_map10.jpg. Accessed October 2020.

strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.[6]

California Office of Emergency Services

The California Office of Emergency Services (OES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 in order for the State to receive Federal funding. The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

California Fire Code (2016)

The 2016 Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to some construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California. The 2016 Fire Code has been updated to the 2019 Fire Code and will go into effect January 1, 2020. The code update is fully integrated and based on the 2018 International Fire Code.

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, the project would have a significant impact on land use as follows:

- If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:
    - Substantially impair an adopted emergency response plan or emergency evacuation plan?

[6] California Department of Forestry and Fire Protection. 2018 Strategic Fire Plan for California. https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf. Accessed October 2020.

- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impacts and Mitigation Measures

Impact 3.20-1: *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan, expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary of ongoing impacts to the environment, or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, if the project were located in or near state responsibility areas or lands classified as very high fire hazard severity zones?*

Less Than Significant. The proposed Project site is approximately 3.75 northeast of the nearest State Responsibility Area and over 60 miles east of the nearest LRA Very High Fire Hazard Severity Zone. The Project site lies on the Valley floor and is surrounded by active agriculture, in various stages of production. Impacts associated with Project development would be ***less than significant*** related to wildfires given the distance the proposed Project from the State Responsibility Area and the State's Very High Fire Hazards Severity Zone and the intervening land uses between them.

Mitigation Measures

None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. As discussed above, the topography in the Project area is nearly flat with the nearest State Responsibility Area approximately 3.75 miles southwest. The

proposed Project lies on the Valley floor and is surrounded by active agriculture, in various stages of production, which precludes likelihood of wildfires within the vicinity. Cumulative impacts related to wildfires are ***less than cumulatively considerable***.

Chapter 4

ALTERNATIVES

PROJECT ALTERNATIVES

4.1 Introduction

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the "rule of reason" that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6(e) identifies the requirements for the "No Project" alternative. The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

Alternative locations can also be evaluated if there are feasible locations available. Each alternative is evaluated against the Project objectives and criteria established by the Lead Agency.

4.2 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the Project objectives:

- To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.
- To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.
- To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.
- To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.
- To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.

4.3 Alternatives Considered in this EIR

- No Project
- Alternate Location
- Reduced (50%) Project

No Project Alternative

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The No Project scenario in this case consists of retaining the property in its original configuration, with no additional construction or operation of the proposed pistachio processing facility. Under this alternative, the site remains as agricultural land and no new development would occur on the site.

Description

This alternative would avoid both the adverse and beneficial effects of the Project. This alternative would avoid site-disturbance and construction-related impacts, as well as operational impacts associated with the proposed Project. The No Project Alternative would avoid the generation of any environmental impacts.

Environmental Considerations

Continuation of the site as vacant and unoccupied would result in all environmental impacts being less than the proposed Project. There would be no changes to any of the existing conditions and there would be no impact to each of the 20 CEQA Checklist evaluation topics.

Project Objectives

The following is a determination of whether the No Project Alternative meets the Project Objectives:

No Project Alternative Evaluation of Project Objectives

Project Objective	Objective Met?		Explanation
	Yes	No	
• To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.		X	No pistachio processing facility would be established.
• To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.		X	With no new facility, pistachios would continue to be trucked to other locations.
• To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.		X	With no new facility, no new employment will occur.

Project Objective	Objective Met?		Explanation
	Yes	No	
• To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.		X	With no new facility, no beneficial water reuse would occur.
• To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.		X	With no new facility, no beneficial solid material reuse would occur.

The No-Project Alternative by definition would not meet the objectives of the proposed Project.

Alternate Location

The environmental considerations associated with an alternative site would be highly dependent on several variables, including physical site conditions, surrounding land use, site access, and suitability of the local roadway network. Physical site conditions include land, air, water, minerals, flora, fauna, noise, or objectives of historic or aesthetic significance, and would affect the nature and degree of direct impacts, needed environmental control systems, mitigation, and permitting requirements. Surrounding land use and the presence of sensitive receptors would influence neighborhood compatibility issues such as air pollutant emissions and health risk, odor, noise, and traffic. Site access and ability of the local roadway network to accommodate increased traffic without excessive and costly off site mitigation would be an important project feasibility issue.

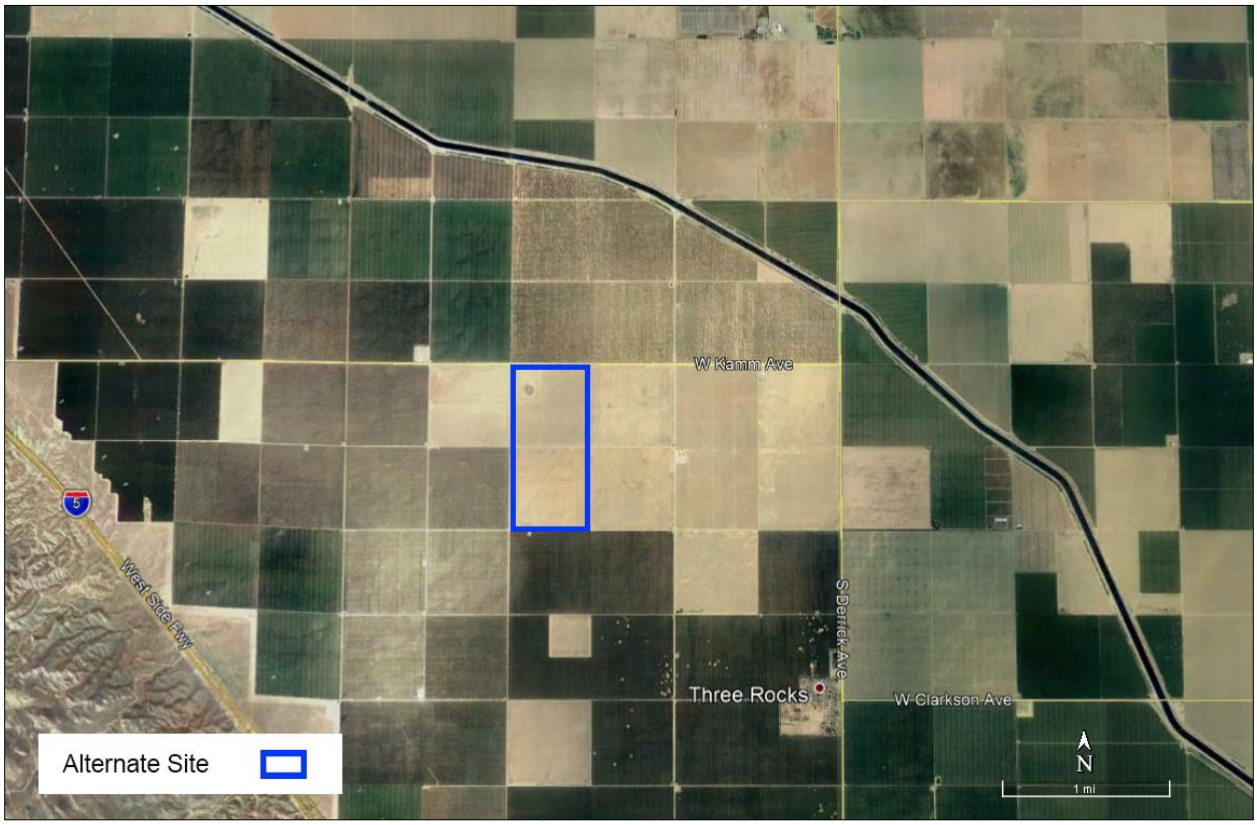
The constraint on alternative site selection is the lessening or elimination of significant project impacts. The economic viability of the proposed Project is dependent on ability to effectively develop a pistachio processing facility in the general region of the proposed Project in a timely manner. To maintain most of the project objectives, any potentially feasible alternative site needs to be of adequate size and in a location that is accessible and serviceable (utilities) by the local jurisdictions.

Description

There are relatively few sites within the Project area that are owned or controlled by the Project Applicant and that provide adequately sized lands suitable for the proposed Project. The criteria for selection included whether or not the alternate site would substantially reduce environmental impacts, availability of land, adequately sized parcels, efficiency of access, and acceptable land use designations/zoning.

There is an approximately 315-acre area located immediately west of the Project site that is controlled by the Project Applicant (See Figure 4-1). The site has historically been used for agricultural purposes. However, the site is currently vacant but has been disked/disturbed.

Figure 4-1
Alternate Location Map



For purposes of environmental evaluation, a description of potential environmental impacts is provided below.

Environmental Considerations

Development of an alternate site could theoretically meet most of the Project objectives presented earlier in this chapter. However, construction and operation of an alternate site would not be as cost effective or operationally efficient and thus is not consistent with the Project objectives. In addition, construction and operation at an alternate site would result in environmental impacts that are likely equal to or in some cases greater than the proposed Project. The majority, if not all of project impacts from this Alternative are likely to occur at an alternate site. One beneficial aspect of this site is that it is closer in proximity to the existing natural gas source in the area and thus would require less ground disturbance to install gas pipelines to the Project. However, the site is also further away from electrical power as well as the Project's water source. These infrastructure components would be required to be extended at a further distance than the proposed Project. The site identified herein appears to have environmental conditions that are similar to the proposed Project site.

This alternative site would require environmental review once the Applicant has prepared sufficient project description information. The time requirements for these activities would reduce the ability of the Applicant to accommodate projected pistachio processing demand in a timely manner compared to the proposed Project. This alternative would be the most complex, costly, and time-consuming alternative to implement. Various engineering and technical studies would then be completed to define the project and its components. Environmental review and obtaining entitlements would follow prior to construction activities. It should be noted that the proposed Project did not result in any significant and unavoidable impacts. Surveys were conducted for biological and cultural resources, and various technical studies were prepared to support the determination that the Project would not have a significant impact on the environment. An alternate location could potentially identify currently unknown environmental impacts.

Project Objectives

The following is a determination of whether the Alternate Location Alternative meets the Project Objectives:

Alternate Location Alternative Evaluation of Project Objectives

Project Objective	Objective Met?		Explanation
	Yes	No	
• To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.	X		This Alternative is similar to the proposed Project. Thus it meets the Project Objectives.
• To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.	X		This Alternative is similar to the proposed Project. Thus it meets the Project Objectives.
• To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.	X		This Alternative is similar to the proposed Project. Thus it meets the Project Objectives.
• To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.	X		This Alternative is similar to the proposed Project. Thus it meets the Project Objectives.
• To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.	X		This Alternative is similar to the proposed Project. Thus it meets the Project Objectives.

The Alternate Location Alternative could meet the objectives of the proposed Project.

Reduced (50%) Project

A reduction of 50% in the Project is a reasonable amount to illustrate what impact such an alternative would have on the significant effects of the proposed Project.

Description

This alternative would keep the same acreage as the proposed Project, but would reduce the amount of finished pistachio products from 60 millions pounds per year to 30 million pounds. A corresponding reduction in site facilities (e.g. processing buildings, offices, storage facilities, parking, etc.) would occur.

Environmental Considerations

Most of the environmental issues associated with this alternative would be similar to those of the proposed Project. However, this alternative does likely reduce impacts to the following areas:

- Air Quality/Energy/Greenhouse Gas Emissions: According to the Air Quality Impact Analysis/Energy/Greenhouse Gas Study (See Appendix B of this document), the proposed Project will have annual air pollutant emission rates which are less than the applicable San Joaquin Valley Air Pollution Control District thresholds of significance for these topics. Even though the proposed project is below existing thresholds of significance, this alternative would have lower annual emission rates than the proposed project for the following criteria pollutants: CO, NOx, VOC, Sox, PM10 and PM2.5. Air pollutant emission rates associated with this alternative are lower because of the reduction in truck hauling, employee trips and other associated trips.
- Hydrology: According to Section 3.10, the Project will have a less than significant impact on hydrology and water quality (with mitigation). Even though the proposed Project is below existing thresholds (with mitigation), a reduced project would decrease water use and water quality impacts generated by the Project. Therefore, hydrologic impacts are lower than the proposed Project.
- Noise: According to Section 3.13, the Project will cause increased ambient noise levels along the roadways associated with the increase of Project-related vehicles. However, this increase is not considered significant. Even though the proposed Project is below existing thresholds, a reduced project would decrease noise impacts generated by the Project. Therefore, noise impacts are lower than the proposed Project.
- Traffic: According to the Traffic Study prepared for the Project (Appendix I), the Project will generate vehicle miles traveleled (VMT) impacts that could potentially cause significant impacts, which require mitigation. It is likely that a reduced project would

result in less VMT being required than the proposed Project. Thus, traffic impacts are lower than the proposed Project. However, it should be noted that if a reduced capacity alternative is selected, the reduced facility may not have the capacity to serve all of the existing demand for pistachio processing in the area. This may result in additional VMT from pistachio-hauling trucks in the area who would have to use other processing facilities located further away.

Project Objectives

The following is a determination of whether the Reduced (50%) Alternative meets the Project Objectives:

Reduced (50%) Alternative Evaluation of Project Objectives

Project Objective	Objective Met?		Explanation
	Yes	No	
• To provide a modern, state-of-the-art pistachio processing facility in the vicinity of existing pistachio orchards in unincorporated Fresno County that currently lack access to local processing plants.	Partial		A reduced project would result in a lower capacity to process pistachios in the area and would not fulfill existing demand. Thus, pistachio farmers would continue to have to utilize processing facilities located further away. The objective is therefore only partially met.
• To significantly reduce the length of the truck trips and associated roadway wear and tear, air pollution, and greenhouse gas emissions required to deliver pistachios to processing facilities from local orchards each year.	Partial		A reduced project would result in some reduction of truck trip lengths because of the proximity of the new facility. However, a reduced project does not meet existing demand for processing facilities, thus pistachio farmers would continue to have to utilize processing facilities located further away.

Project Objective	Objective Met?		Explanation
	Yes	No	
• To provide new full-time and seasonal employment opportunities in historically disadvantaged locations of unincorporated Fresno County.	Partial		A reduced project would result in some new employment opportunities, but less than the proposed Project.
• To maximize the economic benefit derived from water use in unincorporated Fresno County by contracting to use agricultural irrigation water currently used for pistachio crops and by returning 80 to 90 percent of the water for pistachio orchard irrigation in the region.	Partial		A reduced project would result in some reuse of water in the area.
• To maximize the beneficial reuse of organic solid materials generated from pistachio processing, including use as fertilizer, soil amendments and compost by pistachio growers in the vicinity of the Project.	Partial		A reduced project would result in some reuse of solid materials in the area.

The Reduced (50%) Alternative could partially meet the objectives of the proposed Project.

4.4 Summary of Potential Impacts of Alternatives

Table 4-1 is a generalized comparative assessment of potential impacts of the alternatives.

Table 4-1
Alternatives Potential Impact Analysis

Environmental Issues	No Project	Alternate Site	Reduced (50%) Project
Aesthetics	Less	Similar	Similar
Agriculture / Forest Resources	N/A	N/A	N/A

Environmental Issues	No Project	Alternate Site	Reduced (50%) Project
Air Quality	Less	Similar	Less
Biological Resources	Less	Similar	Similar
Cultural Resources	Less	Similar	Similar
Geology and Soils	Less	Similar	Similar
Greenhouse Gas Emissions	Less	Similar	Less
Hazards and Hazardous Materials	Less	Similar	Similar
Hydrology and Water Quality	Less	Similar	Less
Land Use / Planning	Less	Similar	Similar
Noise	Less	Similar	Less
Population / Housing	Less	Similar	Less
Public Services	Less	Similar	Less
Recreation	Less	Similar	Less
Transportation and Traffic	Less	Similar	Less
Tribal Cultural Resources	Less	Similar	Similar
Utilities and Service Systems	Less	Similar	Less
Cumulative Impacts	Less	Similar	Less
Impact Reduction	Yes	Yes	Yes

Environmentally Superior Alternative

Based on a review of the alternatives evaluated in this chapter, the No Project Alternative would result in the fewest impacts on the environment. However, the No Project Alternative would not meet the County's objectives, as identified in this chapter.

Apart from the No Project Alternative, the Reduced Alternative (50%) Project would be the Environmentally Superior alternative because it would result in less adverse physical impacts to the environment with regard to air, water, noise, traffic and utilities. However, the Reduced (50%) Project does not meet all of the Project objectives, particularly with regard to meeting existing

demand for a pistachio processing facility, as identified earlier in this chapter. The Alternate Location Alternative would result in similar environmental impacts to the proposed Project.

Summary and Determination

Only the No Project and Reduced Project Alternatives could potentially result in fewer impacts than the proposed Project's impacts. These Alternatives however, would not fully meet the objectives of the proposed Project. After this full, substantial, and deliberate analysis, the proposed Project remains the preferred alternative.

Chapter 5

OTHER CEQA REQUIREMENTS

CEQA CONSIDERATIONS

5.1 Growth-Inducing Impacts

CEQA Section 15126 (d) requires that any growth-inducing aspect of a project be addressed in an EIR. This discussion includes consideration of ways in which the proposed Project could directly or indirectly foster economic or population growth with the construction and operation of the proposed Project in the surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) are also considered in this discussion. The proposed Project is the establishment of a pistachio processing facility that is being proposed in response to the demand for pistachio processing in the area. The Project is consistent with the County of Fresno General Plan and is located in a remote area with sparse housing opportunities onsite.

The proposed Project would create a relatively minor number of new employment opportunities during construction and operation of the Project; however, those positions would likely be readily filled by the existing employment base. Employment is estimated at 60 people year-round and an additional 60 people during harvest periods with two shifts per day. Proposed Project construction would provide short-term construction jobs over 40 weeks. Many of the construction jobs would be temporary and would be specific to the variety of construction activities. The workforce would include a variety of construction trade workers, such as cement finishers, ironworkers, welders, carpenters, electricians, painters, and laborers. Generally, construction workers are only at a job site for the timeframe in which their specific skills are needed to complete that phase of construction. Although the proposed Project would increase the number of employees at the Project site during construction activities, it is expected that local and regional construction workers would be available to serve the proposed Project's construction needs. Similarly, it is expected that the 60 year-round employees and the 60 additional seasonal employees will come from the existing Fresno County workforce as the unemployment rate in Fresno County was 10.4% as of September 2020.[1]

There are no other aspects of the Project (such as creation of oversized utility lines, zone changes, etc.) that would induce further growth in the area. The proposed Project would not result in significant growth-inducing impacts.

Conclusion: The project would have ***less-than-significant*** growth-inducing impacts.

[1] State of California Employment Development Department. Fresno Metropolitan Statistical Area for Fresno County. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/frsn$pds.pdf. Accessed October 2020.

5.2 Irreversible Environmental Changes

Section 15126(f) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Section 15126.2(c) identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the Project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products. During the operational phase of the proposed Project, energy would be used for powering the facility (e.g. pistachio processing equipment, lighting, heating, cooling, and other requirements). The use of these resources would not be substantial and would not constitute a significant effect.

Conclusion: The project would have ***less-than-significant*** irreversible environmental changes.

Chapter 6

Preparers

PREPARERS

6.1 List of Preparers

Crawford & Bowen Planning, Inc. (EIR Consultants)

- Travis Crawford, AICP, Principal Environmental Planner
- Emily Bowen, LEED AP, Principal Environmental Planner

JLB Traffic Engineering, Inc. (Traffic Study)

Mitchell Air Quality Consulting (Air Quality/Energy/GHG Study)

Provost & Pritchard (Hydrology and Water Quality/Supply Analysis)

QK, Inc. (Biological Survey/Report)

RMA Geoscience (Geotechnical Feasibility Report)

Table Mountain Rancheria (Cultural Survey/Report)

WJV Acoustics (Noise Assessment)

6.2 Persons and Agencies Consulted

County of Fresno

- David Randall, Senior Planner

Appendices