

PUBLIC REVIEW DRAFT

Environmental Impact Report

14800 W. Schulte Road Logistics Center

March 2021



PREPARED FOR:

San Joaquin County
Community Development Department

1810 East Hazelton Avenue
Stockton, California 92505



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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
µg/m ³	micrograms per cubic meter
AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
BAU	business-as-usual
BMP	best management practice
BPS	best performance standard
CAAQS	California Ambient Air Quality Standard
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCaIC	Central California Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFGC	California Fish and Game Code
CH ₄	methane
CHRIS	California Historical Resources Information System
City	City of Tracy
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
County	County of San Joaquin
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSTDM	California Statewide Travel Demand Model
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	electric vehicle

Acronym/Abbreviation	Definition
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
HBW	home-based work
HCHC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
I	Interstate
IS	Initial Study
ISR	Indirect Source Review
L _{dn}	day night average sound level
LEED	Leadership in Energy and Environmental Design
L _{eq}	equivalent continuous sound level
LOS	level of service
MM	Mitigation Measure
MMT	million metric tons
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric ton
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standard
NAHC	Native American Heritage Commission
NF ₃	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
OPR	Governor's Office of Planning and Research
PDF	Project Design Feature
PFC	perfluorocarbon
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to 10 microns
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
Project	14800 W. Schulte Road Logistics Center
psi	pounds per square inch

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
RACT	Reasonably Available Control Technology
RCNM	Roadway Construction Noise Model
RFS	Renewable Fuel Standard
ROG	reactive organic gas
RPS	Renewable Portfolio Standard
RTDM	Regional Travel Demand Model
RTP	Regional Transportation Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin Multi-Species Habitat Conservation and Open Space Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SRA	State Responsibility Area
SSJCFA	South San Joaquin County Fire Authority
SWPPP	Stormwater Pollution Prevention Plan
SWQCCP	Stormwater Quality Control Criteria Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCR	tribal cultural resource
TIA	Traffic Impact Analysis
TNM	Traffic Noise Prediction Model
USFWS	U.S. Fish and Wildlife Service
VdB	vibration decibel
VMT	vehicle miles traveled
VOC	volatile organic compound
ZEV	zero-emissions vehicle

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1 Executive Summary

1.1 Introduction

The California Environmental Quality Act (CEQA) requires that local government agencies, before taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a document designed to provide to the public and to local and state governmental agency decision makers an analysis of potential environmental consequences of a project to support informed decision making.

The County of San Joaquin (County) prepared this Draft EIR to provide the public and responsible agencies information about the potential adverse impacts on the local and regional environment associated with implementation of the 14800 W. Schulte Road Logistics Center (Project). This Draft EIR was prepared pursuant to CEQA, codified at California Public Resources Code Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

This section includes a summary of all Project impacts and associated mitigation measures, a statement of the ultimate level of impact significance after mitigation is applied, a summary of Project alternatives, and areas of controversy known to the lead agency and issues to be resolved.

1.2 Project Location

The approximately 37.96-acre Project site is located at 14800 West Schulte Road within southwestern unincorporated San Joaquin County, California. The Project site lies outside of the boundaries of the City of Tracy but within its Sphere of Influence. The site is composed of one parcel (Assessor's Parcel Number 209-240-23), located at the northwestern corner of the intersection of West Schulte Road and Quality Road. Regional access to the Project site is provided by Interstate (I) 580 and I-205, located approximately 1.5 miles to the southwest and north, respectively, and I-5, located approximately 8 miles to the east. Under existing conditions, the Project site is vacant and contains bare expanses of soil interspersed with ruderal vegetation. The Project site was formerly used as a biomass energy facility, which was decommissioned and demolished in 2019.

1.3 Project Description

Project Summary

The Project would involve construction and operation of three single-story industrial buildings totaling approximately 678,913 gross square feet. In addition to the warehouse space, Building C would also include approximately 3,000 square feet of office space to support internal office activities. The buildings would be used for light warehousing and distribution operations. The Project would also include on-site circulation and site access, parking, landscaping, and utility improvements.

Project Construction

Construction is expected to commence in 2021 and would last through 2022. It is anticipated that soil quantities would be balanced on site during grading activities.

1.4 Project Objectives

The primary objectives sought by the Project are as follows:

- **Objective 1:** Develop a jobs-producing and tax-generating land use near transportation corridors within San Joaquin County that provides diverse economic opportunities for those residing and wishing to invest within southern San Joaquin County.
- **Objective 2:** Concentrate non-residential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, and industrial noise to the greatest extent feasible.
- **Objective 3:** Develop a fiscally sound and employment generating land use that maximizes utilization of an underutilized, previously developed industrially zoned parcel.
- **Objective 4:** Fulfill the existing and growing demand for logistics and warehouse uses in the region.
- **Objective 5:** Construct high-quality industrial development in an appropriate location, consistent with existing surrounding industrial land uses in the vicinity.

1.5 Summary of Environmental Impacts and Mitigation Measures

Table 1-1, Summary of Environmental Impacts and Mitigation Measures provides an overview of the impact analysis and a summary of environmental impacts (before and after mitigation) resulting from implementation of the Project, pursuant to CEQA Guidelines Section 15123(b)(1). For a more detailed discussion of Project impacts, please see the sections within Chapter 4, Environmental Analysis, of this EIR and Appendix A.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
<i>Aesthetics</i>			
Would the Project have a substantial adverse effect on a scenic vista?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less than Significant	None required.	Less-than-Significant Impact
In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on aesthetic resources?	Less than Significant	None required.	Less-than-Significant Impact
<i>Agriculture and Forestry Resources</i>			
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?	No Impact	None required.	No Impact
Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	None required.	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	None required.	No Impact
Would the Project result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	None required.	No Impact
Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact	None required.	No Impact
Would the Project have a cumulative effect on agriculture and forestry resources?	No Impact	None required.	No Impact
Air Quality			
Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant	<p>MM-AQ-1: Vehicle Miles Traveled Reduction Strategies. The Project shall implement a Transportation Demand Management (TDM) Program to facilitate increased opportunities for bicycling and pedestrian travel, as well as provide the resources, means, and incentives for ride-sharing and carpooling to reduce vehicle miles traveled and associated criteria air pollutant emissions. The following components are to be included in the TDM Program:</p> <p><i>Bicycle and Pedestrian Travel</i></p> <ul style="list-style-type: none"> a. Provide bicycle parking facilities: one bike rack space per 20 vehicle/employee parking 	Significant and Unavoidable

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>spaces or to meet demand, whichever results in the greater number of bicycle racks.</p> <p>b. Provide shower and locker facilities to encourage employees to bike and/or walk to work: one shower and three lockers per every 25 employees.</p> <p><i>Ride-Sharing and Commute Reduction</i></p> <p>c. Promote ridesharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ridesharing vehicles; designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles; or providing a website or message board for coordinating rides.</p> <p>Implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute trip-reduction strategies. Implementing commute trip-reduction strategies without a complementary marketing strategy would result in lower vehicle miles traveled reductions. Marketing strategies may include new employee orientation of trip reduction and alternative mode options, event promotions, or publications.</p> <p>MM-AQ-2: Idling Restriction. The Project shall minimize idling time of all vehicles and equipment to the extent feasible; idling for periods of greater than 5 minutes shall be prohibited. Signage shall be posted at truck parking spots, entrances, and truck bays advising that idling time shall not exceed 5 minutes per idling location. To the extent feasible,</p>	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		the tenant shall restrict idling emission from trucks by using auxiliary power units and electrification. MM-AQ-3: Forklifts and Yard-Trucks. During operation, the Project shall require that all forklifts are powered by electricity or other zero-emission technology; if electric is not available or feasible, propane is acceptable. All yard trucks shall meet Tier 4 Interim standards or better or utilize zero-emission technology (electric, fuel-cell, etc.).	
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?	Potentially Significant	MM-AQ-1 through MM-AQ-3	Significant and Unavoidable
Would the Project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant	MM-AQ-3	Less-than-Significant Impact
Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	None required.	Less-than-Significant impact
Would the Project have a cumulative effect on air quality resources?	Potentially Significant	MM-AQ-1 through MM-AQ-3	Significant and Unavoidable
Biological Resources			
Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially Significant	MM-BIO-1: Avoid and Minimize Impacts to Burrowing Owl. Measures identified in the Incidental Take Minimization Measures (ITMM) document (SJCOG 2020) shall be implemented to ensure that Project-related impacts to burrowing owl are avoided or minimized. In the event that the SJMSCP is not used to mitigate species impacts, the following measures, similar to those included in the ITMM document, shall be implemented.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>The following measures to discourage ground squirrel presence, which would limit habitat suitability for burrowing owls, shall be implemented:</p> <ul style="list-style-type: none"> • New vegetation shall be planted or existing vegetation shall be retained entirely covering the site at a height of approximately 36 inches above the ground. Vegetation shall be retained until construction begins. Vegetation shall discourage ground squirrel and burrowing owl use of the site. Alternatively, the Project applicant may disc or plow the entire Project site to destroy any ground squirrel burrows. Before burrows are destroyed, ground squirrels shall be removed through one of the following approved methods to prevent reoccupation of the Project site: anticoagulants, zinc phosphide, fumigants, or traps. Detailed descriptions of these methods are included in San Joaquin Multi-Species Habitat Conservation and Open Space Plan, Appendix A, Protecting Endangered Species, Interim Measures for Use of Pesticides in San Joaquin County, dated March 2000. • If burrowing owls are known to occupy the site prior to Project construction, pre-construction surveys for burrowing owls shall be conducted no less than 14 days, and again within 24 hours, prior to commencement of ground disturbance. Any burrowing owl pre-construction surveys shall be conducted following the protocol within the Staff Report on Burrowing Owl Mitigation (CDFW 2012). • During the breeding season (February 1 through August 31), any occupied burrows shall not be disturbed and shall be provided with a 75-meter 	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>protective buffer until and unless the Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies (representatives on the TAC), or unless a qualified biologist approved by the Permitting Agencies, verifies through non-invasive means that either (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, a Burrowing Owl Exclusion Plan shall be developed and approved by the applicable Department of Fish and Wildlife San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) representative/office, and habitat shall be mitigated in accordance with the Staff Report (CDFW 2012), then the burrow can be destroyed. Pre-construction surveys following destruction of burrows and prior to initial construction activities are required (24 hours prior) to ensure owls do not re-colonize the Project site. If Project activities are delayed or suspended for more than 15 days during the breeding season, surveys shall be repeated.</p> <ul style="list-style-type: none"> • During the non-breeding season (September 1 through January 31), burrowing owls may be evicted after a Burrowing Owl Exclusion Plan is developed and approved by the applicable Department of Fish and Wildlife SJMSCP representative/office and habitat is mitigated in accordance with the Staff Report (CDFW 2012). <p>Pre-construction surveys following destruction of burrows and prior to initial construction activities are</p>	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>required (24 hours prior) to ensure owls do not re-colonize the Project site. If owls are found within 50 meters of the Project site, it is recommended that visual screens or other measures are implemented to limit disturbance of the owls without evicting them from the occupied burrows.</p> <p>MM-BIO-2: Avoid and Minimize Impacts to Native and Migratory Nesting Birds. Mitigation measures identified in the Incidental Take Minimization Measures (ITMM) document (SJCOG 2020) shall be implemented to avoid and minimize impacts to native and migratory nesting birds. In the event that the San Joaquin Multi-Species Habitat Conservation and Open Space Plan is not used to mitigate species impacts, the following measures, similar to those included in the ITMM document, shall be implemented.</p> <ul style="list-style-type: none"> • Pre-construction nesting bird surveys shall be conducted no greater than 14 days prior to commencement of construction activities (including ground disturbance or vegetation removal), if Project activities must commence during the nesting bird season (February 1 through September 15). • If an active bird nest is detected during pre-construction surveys or at any other time during Project construction, appropriate disturbance avoidance buffers shall be established by a qualified biologist. Nest avoidance buffers shall be a minimum of 100 feet surrounding an active nest but vary depending on species and site-specific circumstances. Avoidance buffers for state or federally listed special-status species 	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>are typically 500 feet. Construction activities shall not be permitted within any established nest buffer until the nest is determined by a qualified biologist to be inactive.</p> <ul style="list-style-type: none"> • All vegetation removal, trimming, and grading of vegetated areas shall occur outside of the peak bird breeding season to the maximum extent practicable. Available resources, such as internet-based tools (e.g., the U.S. Fish and Wildlife Service’s Information, Planning and Conservation system and Avian Knowledge Network) shall be used to identify peak breeding months for local bird species or the local Service Migratory Bird Program Office shall be contacted for breeding bird information. • A vegetation maintenance plan shall be prepared that outlines vegetation maintenance activities and schedules so that direct bird impacts do not occur. <p>To the maximum extent practicable, construction activities shall be limited to the time between dawn and dusk to avoid the illumination of adjacent habitat areas. If construction activity time restrictions are not possible, down-shielding or directional lighting shall be used to avoid light trespass into bird habitat (i.e., use a “Cobra”-style light rather than an omnidirectional light system to direct light down to the site). To the maximum extent practicable while allowing for public safety, low-intensity energy-saving lighting (e.g. low-pressure sodium lamps) shall be used. Illumination of lighting on associated construction and operation structures</p>	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>shall be minimized by using motion sensors or heat sensors.</p> <p>MM-BIO-3: Avoid and Minimize Unintentional Wildlife Entrapment. Measures identified in the Incidental Take Minimization Measures document (SJCOG 2020) shall be implemented to avoid and minimize impacts related to wildlife entrapment in Project equipment and materials, and to prevent birds from perching or nesting on the Project site where they would be unsafe or vulnerable to potential disturbance, as follows:</p> <ul style="list-style-type: none"> • Prior to the nesting bird season, anti-perching devices shall be installed on equipment or structures within the Project site that present a suitable place for birds to nest or perch. Alternatively, access to potentially suitable nesting surfaces shall be enclosed with mesh netting, chicken wire fencing, or other suitable exclusion material or otherwise prevented until construction activities are complete or until the structure is removed. • During the time that the birds are trying to build or occupy their nests (generally, April through August, depending on the geographic location), potential nesting surfaces shall be monitored at least once every 3 days for any nesting activity, especially where bird use of structures is likely to cause take. It is permissible to remove non-active nests (without birds or eggs), partially completed nests, or new nests as they are built (prior to occupation). If birds have started to build any nests, the nests shall be removed before they are completed. Water shall not be 	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>used to remove the nests if nests are located within 50 feet of any surface waters. If an active nest becomes established (i.e., there are eggs or young in the nest), all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied. Construction activities that may displace birds after they have laid their eggs and before the young have fledged shall not be permitted. If the Project continues into the following spring, this cycle shall be repeated. When work is complete, all netting shall be removed and properly disposed of.</p> <ul style="list-style-type: none"> • To prevent entrapment and mortality of smaller wildlife and birds, all pipes, culverts, or similar structures that are stored at the construction site vertically or horizontally for one or more overnight periods shall be securely capped on both ends prior to storage and thoroughly inspected for wildlife prior to implementation at the Project site. All hollow pipes or posts installed as part of the Project and exposed to the environment shall be capped, screened, or filled with material by the Project proponent prior to the end of the workday. • To prevent entanglement of raptor talons, any post with exposed perforations installed on the Project site and exposed to the environment shall have the holes permanently filled within the top 6 inches of the post upon installation. <p>Any open trenches, pits, or holes with a depth larger than 1 foot shall be covered at the conclusion of work each day with a hard, non-heat-conductive material (i.e., plywood). No netting, canvas, or</p>	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		material capable of trapping or ensnaring wildlife shall be used to cover open trenches. If use of a hard cover is not feasible, multiple wildlife escape ramps shall be installed, constructed of wood or installed as an earthen slope, in each open trench, hole, or pit that is capable of allowing large (i.e., deer) and small (i.e., snakes) animals to escape on their own. Prior to the initiation of construction each day and prior to the covering of the trench at the conclusion of work each day, on-site personnel shall inspect the open trench, pit, or hole for wildlife. If wildlife is discovered, it shall be allowed to leave on its own.	
Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	No Impact	None required.	No Impact
Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact	None required.	No Impact
Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on biological resources?	Significant	MM-BIO-1 through MM-BIO-3	Less-than-Significant Impact
<i>Cultural and Tribal Cultural Resources</i>			
Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant	MM-CUL-1: Inadvertent Discovery of Archaeological Resources. In the event that potential archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior’s Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending on the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5[f]; California Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. Avoidance shall be considered the preferred option for treatment of identified archaeological resources. If the discovery proves significant under CEQA,	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted.	
Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially Significant	MM-CUL-2: Inadvertent Discovery of Human Remains. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any adjacent area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC shall immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated Native American representative shall then determine, in consultation with the property owner, the disposition of the human remains.	Less-than-Significant Impact
Would the Project have a cumulative effect on cultural resources?	Less than Significant	MM-CUL-1 and MM-CUL-2	Less-than-Significant Impact
Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	MM-CUL-3: In the event that paleontological resources (fossil remains) are exposed during construction activities for the Project, all construction work occurring within 50 feet of the find shall immediately stop until a qualified paleontologist, as defined by the Society of Vertebrate Paleontology’s 2010 guidelines, can	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		assess the nature and importance of the find. Depending on the significance of the find, the paleontologist may record the find and allow work to continue or recommend salvage and recovery of the resource. All recommendations will be made in accordance with the Society of Vertebrate Paleontology’s 2010 guidelines and shall be subject to review and approval by the County of San Joaquin. Work in the area of the find may only resume upon approval of a qualified paleontologist.	
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
a. 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)?	Less than Significant	None required.	Less-than-Significant Impact
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project have a cumulative effect on tribal cultural resources?	Less than Significant	None required.	Less-than-Significant Impact
Energy			
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	None required.	Less-than-Significant Impact
Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on energy resources?	Less than Significant	None required.	Less-than-Significant Impact
Geology and Soils			
Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. 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?	No Impact	None required.	No Impact
b. Strong seismic ground shaking?	Less than Significant	None required.	Less-than-Significant Impact
c. Seismic related ground failure including liquefaction?	Less than Significant	None required.	Less-than-Significant Impact
d. Landslides?	No Impact	None required.	No Impact
Would the Project result in substantial soil erosion or the loss of topsoil?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on geology and soils resources?	Less than Significant	None required.	Less-than-Significant Impact
Greenhouse Gas Emissions			
Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	None required.	Less-than-Significant Impact
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	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on greenhouse gas emissions?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
<i>Hazards and Hazardous Materials</i>			
Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	None required.	No Impact
Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less than Significant	None required.	Less-than-Significant Impact
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	No Impact	None required.	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on hazards or hazardous materials?	Less than Significant	None required.	Less-than-Significant Impact
<i>Hydrology and Water Quality</i>			
Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			
a. result in substantial erosion or siltation on or off site;	Less than Significant	None required.	Less-than-Significant Impact
b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
c. 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	Less than Significant	None required.	Less-than-Significant Impact
d. impede or redirect flood flows?	Less than Significant	None required.	Less-than-Significant Impact
In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?	No Impact	None required.	No Impact
Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on hydrology or water quality resources?	Less than Significant	None required.	Less-than-Significant Impact
Land Use and Planning			
Would the Project physically divide an established community?	No Impact	None required.	No Impact
Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on land use resources?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Mineral Resources			
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?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on mineral resources?	Less than Significant	None required.	Less-than-Significant Impact
Noise			
Would the Project result in 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?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	None required.	Less-than-Significant Impact
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	No Impact	None required.	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project result in cumulatively considerable noise impacts?	Less than Significant	None required.	Less-than-Significant Impact
<i>Population and Housing</i>			
Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	None required.	No Impact
Would the Project have a cumulative effect on housing and/or population resources?	Less than Significant	None required.	Less-than-Significant Impact
<i>Public Services</i>			
Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection?	Less than Significant	None required.	Less-than-Significant Impact
Police protection?	Less than Significant	None required.	Less-than-Significant Impact
Schools?	Less than Significant	None required.	Less-than-Significant Impact
Parks?	Less than Significant	None required.	Less-than-Significant Impact
Other public facilities?	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the Project have a cumulative effect on public services resources?	Less than Significant	None required.	Less-than-Significant Impact
Recreation			
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?	Less than Significant	None required.	Less-than-Significant Impact
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?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on recreation resources?	Less than Significant	None required.	Less-than-Significant Impact
Transportation			
Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less than Significant	None required.	Less-than-significant impact
Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially Significant	<p>MM-TRAF-1: The Project would require one of the two following improvements to mitigate impacts to site access, consistent with County of San Joaquin requirements to adhere to City of Tracy driveway standards:</p> <ul style="list-style-type: none"> • Move western driveway approximately 160 feet to the east to provide the minimum recommended 	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		distance of 500 feet from the 14900 Schulte Road driveway if full access is to be maintained, or <ul style="list-style-type: none"> If the western driveway remains less than 500 feet from the 14900 Schulte Road driveway, driveway will be restricted to right-in/right-out access only. 	
Would the Project result in inadequate emergency access?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on transportation resources?	Less than Significant	None required.	Less-than-Significant Impact
Utilities and Service Systems			
Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or	Less than Significant	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
otherwise impair the attainment of solid waste reduction goals?			
Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on utilities and/or service systems resources?	Less than Significant	None required.	Less-than-Significant Impact
Wildfire			
Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than Significant	None required.	Less-than-Significant Impact
Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less than Significant	None required.	Less-than-Significant Impact
Would the Project have a cumulative effect on wildfire?	Less than Significant	None required.	Less-than-Significant Impact

1.6 Comments Received in Response to the Notice of Preparation

The Notice of Preparation (NOP) for this Draft EIR was released on November 23, 2020, and the public comment period closed on December 22, 2020. The County received four letters, as shown in Table 1-2. The purpose of the NOP process is to solicit input from public agencies and the public on the scope of the EIR analysis. The comments received and a copy of the NOP are included as Appendix A of this Draft EIR.

Table 1-2. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised	EIR Section Where Comment Is Addressed
Native American Heritage Commission (NAHC)	November 24, 2020	Recommendations for cultural assessment by contacting the appropriate regional California Historical Research Information System Center; contacting NAHC for a Sacred Lands File search and Native American Tribal Consultation List; and consulting legal counsel about compliance with Assembly Bill 52 and other applicable laws.	Section 4.3, Cultural and Tribal Cultural Resources
Central Valley Regional Water Quality Control Board	December 18, 2020	Comment letter reaffirmed the applicable state and federal regulations and permitting requirements of the Project.	Section 4.8, Water
California Department of Fish and Wildlife	December 22, 2020	Recommendations for the inclusion of baseline habitat assessments and direction regarding analysis of impacts to special-status species and mitigation measures to offset potential impacts.	Section 4.2, Biological Resources
San Joaquin Valley Air Pollution Control District	December 14, 2020	Recommendations for a more detailed review of the Project's construction and operational emissions using CalEEMod (California Emission Estimator Model), evaluation of heavy-duty truck routing patterns, mitigation measures to reduce Project-related operational emissions, a Health Risk Assessment, and the implementation of a Voluntary Emission Reduction Agreement for the Project.	Section 4.1, Air Quality, and Section 4.5, Greenhouse Gas Emissions

1.7 Areas of Controversy/Issues to Be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires that areas of controversy known to the lead agency be stated in the summary prepared as part of the EIR. This includes increase in traffic on area roadways, noise from additional traffic, and Project-related operational greenhouse gas emissions.

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved; this includes the choice among alternatives and whether or how to mitigate significant impacts and an increase in vehicle miles traveled.

1.8 Alternatives to the Project

Section 15126.6(a) of the CEQA Guidelines states that an EIR shall describe “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project,” as well as provide an evaluation of “the comparative merits of the alternatives.” Under CEQA Guidelines Section 15126.6(a), an EIR does not need to consider alternatives that are not feasible, nor does it need to address every conceivable alternative to the project. The range of alternatives “is governed by the ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice” (14 CCR 15126.6[f]).

No Project/No Development Alternative (Alternative 1)

Under Alternative 1, construction of the Project would not occur. The Project site would remain unchanged, and development activities related to construction and operation of the proposed industrial/warehouse buildings, associated office spaces, surface parking and loading areas, and all other proposed on- and off-site improvements would not occur.

In the short term, consistent with the existing conditions, the Project site would continue to be undeveloped. Under Alternative 1, the Project site would remain vacant, undeveloped land.

No Project/Other Development Alternative (Alternative 2)

Under Alternative 2, the Project site would be redeveloped with other land uses, consistent with the underlying industrial designations and zoning. According to the County’s General Plan, the General Industrial Zone is typically intended for uses such as manufacturing, distribution, storage, and wholesaling.

It is assumed that Alternative 2 would involve development of a land use that would be permissible either by right or by site approval, special purpose plan, improvement plan, or use permit, including the aforementioned land uses listed above. It is also assumed that those uses would share a similar development intensity/floor-area-ratio/site coverage as the Project.

As previously described, the underlying General Industrial (I-G) Zone provides for a full range of industrial uses and similar activities. Uses under Alternative 2 could include agricultural sales, auction yards, automotive rentals and repair, light and heavy construction services, manufacturing, heavy equipment sales and repair, heavy and hazardous materials industrial, recycling services, truck sales and repair, vehicle storage, and utility services. Given that the Project buildings are intended be used for light warehousing and distribution uses as defined by the County of San Joaquin Ordinance Code (Section 9-115.585), which is most commonly warehouse and distribution operations, Alternative 2 could include substantially more intensive industrial uses compared to the Project (such as the previous energy facility located at the site).

Reduced Development Intensity Alternative (Alternative 3)

CEQA Section 15126.6 requires consideration of alternatives to a project that are capable of avoiding or substantially reducing any significant adverse impacts associated with that project. As discussed throughout Chapter 4, Environmental Analysis, of this EIR, except for significant and unavoidable operational air quality impacts, the Project would result in less-than-significant impacts or no impact, with and without implementation of mitigation measures.

Presently, the only feasible approach to reducing the Project's operational-related air quality impacts would be to reduce the total number of daily trips and employees generated by the Project. As such, in an effort to reduce the Project's significant and unavoidable impacts, the County considered a Reduced Development Intensity Alternative (Alternative 3).

Under Alternative 3, the same industrial distribution and warehouse buildings would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 20%. This would equate to an industrial/warehouse project consisting of approximately 543,130 square feet, compared to the Project's 678,913 square feet. Because the building footprint would be reduced by 135,782 square feet (approximately 3.1 acres), this extra space on the site would remain vacant. All other on- and off-site improvements proposed as part of the Project were assumed to still be required under Alternative 3.

Environmentally Superior Alternative

Section 15126(e)(2) of the CEQA Guidelines requires an EIR to identify an "environmentally superior alternative." If the No Project/No Development Alternative is the environmentally superior alternative, which is the case in this analysis, the EIR must identify an environmentally superior alternative from among the other project alternatives.

Based on a comparison of Alternative 2 and Alternative 3, environmental impacts associated with air quality, energy, greenhouse gas emissions, noise, and water would be less under Alternative 3 compared to Alternative 2. However, despite the reduction to air quality impacts, impacts would remain significant and unavoidable. Impacts associated with biological resources, cultural and tribal cultural resources, and transportation would be similar under Alternative 3 compared to Alternative 2. Based on these findings, Alternative 3 would be considered the environmentally superior alternative.

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2 Introduction

2.1 Purpose of the California Environmental Quality Act Process

This Draft Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the 14800 W. Schulte Road Logistics Center (Project). It was prepared in accordance with Title 14, Section 15000 et seq. of the California Code of Regulations (CEQA Guidelines), and the rules, regulations, and procedures for implementing CEQA as adopted by the County of San Joaquin (County). Consistent with Section 15161 of the CEQA Guidelines, this document is a project-level EIR and evaluates the potential environmental impacts associated with a specific project. As the lead agency for the Project, the County must complete an environmental review to determine if the Project could potentially result in significant adverse environmental effects.

CEQA Guidelines Section 15002 states that the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential significant environmental effects of proposed government actions (including the discretionary approval of development projects)
- Identify the ways that environmental damage can be avoided or significantly reduced
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible

If a project will be approved involving significant environmental effects, the lead agency must also disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose.

This Draft EIR provides project-level analysis of the potential environmental effects related to implementation of the Project. The level of impact analysis in this Draft EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines Section 15146. This Draft EIR addresses the potentially significant environmental impacts that could occur as a result of construction and operation of the Project. This document also identifies appropriate and feasible mitigation measures, where necessary, and includes Project alternatives that could be adopted to reduce or avoid potential significant environmental effects.

This Draft EIR is an informational document for public agencies and members of the public, allowing informed decisions to be made regarding the purpose, objectives, and components of the Project. This Draft EIR is the primary reference document for the formulation and implementation of a Mitigation Monitoring and Reporting Program for the Project, in compliance with California Public Resources Code (PRC) Section 21081.6.

2.2 Legal Authority and Lead Agency

This EIR was prepared in accordance with all criteria, standards, and procedures of CEQA (PRC Section 21000 et seq.) and the CEQA Guidelines (14 CCR 15000 et seq.).

Pursuant to CEQA Section 21067 and CEQA Guidelines Article 4 and Section 15367, the County is the lead agency under whose authority this EIR has been prepared. “Lead agency” refers to the public agency that has the principal

responsibility for carrying out or approving a project. Serving as the lead agency and before taking action on the Project, the County has the obligation to (1) ensure that this EIR was completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision-making process; (3) make a statement that this EIR reflects the County's independent judgment; (4) ensure that all significant impacts on the environment are eliminated or substantially lessened, where feasible; and, if necessary (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or Project alternatives identified in this EIR are infeasible and citing the specific benefits of the Project that outweigh its unavoidable adverse effects (14 CCR 15090–15093).

Pursuant to CEQA Guidelines Sections 15040 through 15043, and upon completion of the CEQA review process, the County will have the legal authority to do any of the following:

- Approve the Project
- Require feasible changes in any or all activities involved in the Project to substantially lessen or avoid significant effects on the environment
- Disapprove the Project, if necessary, to avoid one or more significant effects on the environment that would occur if the Project is approved as proposed
- Approve the Project even though the Project would cause a significant effect on the environment if the County makes a fully informed and publicly disclosed decision that (1) there is no feasible way to lessen the effect or avoid the significant effect, and (2) expected benefits from the Project will outweigh significant environmental impacts of the Project

This EIR fulfills the CEQA environmental review requirements for the requested governmental discretionary and ministerial actions related to the Project, including site approval.

This document is an informational document intended for use by County decision makers, trustee and responsible agencies, and members of the public in evaluating the physical environmental impacts of the Project. This Draft EIR is the primary reference document for the formulation and implementation of a Mitigation Monitoring and Reporting Program for the Project, in compliance with PRC Section 21081.6. Environmental impacts cannot always be mitigated to a level considered less than significant. In accordance with Section 15093(b) of the CEQA Guidelines, if a lead agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency must state in writing the specific reasons for approving the Project based on the final CEQA documents and any other information in the public record. This is defined in Section 15093 of the CEQA Guidelines as “a statement of overriding considerations.”

2.3 Responsible and Trustee Agencies

PRC Section 21104 requires that all EIRs be reviewed by state responsible and trustee agencies (see also 14 CCR 15082 and 15086[a]). As defined by CEQA Guidelines Section 15381, “the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval power over the project.” A trustee agency is defined in CEQA Guidelines Section 15386 as “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.”

For this Project, the California Department of Fish and Wildlife is a trustee agency, because the Project has the potential to impact plant and wildlife species that are managed and protected by the state. (As discussed in Section 4.2, Biological Resources, the Project would ultimately result in a less-than-significant impact with incorporation of mitigation).

2.4 Project Background and Overview

The Project would involve construction and operation of three single-story industrial warehouse buildings totaling approximately 678,913 square feet (gross area, inclusive of office/mezzanine space). The Project would also include required on-site circulation, parking, landscaping, and utility improvements.

The Project site is located within southwestern unincorporated San Joaquin County, California. The Project site is located at 14800 West Schulte Road and is composed of one parcel (Assessor's Parcel Number 209-240-23). Under existing conditions, the Project site is vacant and contains bare expanses of soil interspersed with ruderal vegetation. The Project site was formerly used as a biomass energy facility, which was decommissioned and demolished in 2019.

2.4.1 Requested Approvals

The following discretionary and ministerial actions under the jurisdiction of the County would be required. This Draft EIR covers all state and local government and quasi-government approvals that may be needed to implement the Project, whether or not they are explicitly listed in this section or elsewhere in this Draft EIR (14 CCR 15124[d]).

Discretionary Approvals

Community Development Director

- **Site Approval.** A review of the Project's site design by the Community Development Director.
- **Certification of Environmental Impact Report.** Certify or reject this Draft EIR, along with appropriate CEQA Findings and the Mitigation Monitoring and Reporting Program.

Ministerial Approvals

County of San Joaquin Subsequent Implementing Approvals

- Approvals for water, sewer, and storm drain infrastructure
- Issue grading permits
- Issue building permits
- Issue encroachment permits

2.4.2 Project of Statewide, Regional, or Area-Wide Environmental Significance

CEQA Guidelines Section 15206 identifies the types of projects considered to be of statewide, regional, or area-wide significance. When a project is so classified, its Draft EIR must be submitted to the State Clearinghouse of the Governor's Office of Planning and Research, and the appropriate metropolitan area council of governments. This Project meets the following criteria of a project of statewide, regional, or area-wide significance:

- The Project has the potential for causing significant environmental effects extending beyond San Joaquin County

2.5 Scope of this Environmental Impact Report

2.5.1 Notice of Preparation Scoping Process

The purpose of this Draft EIR is to evaluate the potential environmental impacts associated with implementation of the Project. The County concluded that the Project could potentially have direct or indirect adverse effects on the environment. Accordingly, the County determined the need for preparation of an EIR for the Project. The scope of this Draft EIR includes the potential environmental impacts identified in the Initial Study/Notice of Preparation (IS/NOP) that was available for public review from November 23, 2020 through December 22, 2020; comments received during a virtual public scoping meeting held on December 10, 2020; and written comments received in response to the NOP.

A summary of all comment received is provided in Table 2-1. The written comments and the NOP are included in Appendix A of this Draft EIR.

Table 2-1. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised	EIR Chapter/ Section Where Comment is Addressed
State Agency			
Native American Heritage Commission (NAHC)	November 24, 2020	Recommendations for cultural assessment by contacting the appropriate regional California Historical Research Information System Center; contacting NAHC for a Sacred Lands File search and Native American Tribal Consultation List; and consulting legal counsel about compliance with Assembly Bill 52 and other applicable laws.	Section 4.3, Cultural and Tribal Cultural Resources
Central Valley Regional Water Quality Control Board	December 18, 2020	Comment letter reaffirmed the applicable state and federal regulations and permitting requirements of the Project.	Section 4.8, Water
California Department of Fish and Wildlife	December 22, 2020	Recommendations for the inclusion of baseline habitat assessments and direction regarding analysis of impacts to special-status species and mitigation measures to offset potential impacts.	Section 4.2, Biological Resources
San Joaquin Valley Air Pollution Control District	December 14, 2020	Recommendations for a more detailed review of the Project's construction and operational emissions using CalEEMod (California Emission Estimator Model); evaluation of heavy-duty truck routing patterns; mitigation measures to reduce Project-related operational emissions; a Health Risk Assessment; and the implementation of a Voluntary Emission Reduction Agreement for the Project.	Section 4.1, Air Quality Section 4.5, Greenhouse Gas Emissions

2.5.2 Environmental Issues Determined not to be Significant

Pursuant to CEQA, the discussion of potential environmental impacts is focused on those impacts that could be significant or potentially significant. CEQA allows the lead agency to limit the detail of discussion of the environmental impacts that are not considered potentially significant (PRC Section 21100; 14 CCR 15126.2[a] and 15128). CEQA requires that the discussion of any significant environmental effect be limited to substantial, or potentially substantial, adverse changes in physical conditions that exist within the affected area, as defined in PRC Section 21060.5. In accordance with CEQA Guidelines Section 15143, environmental impacts dismissed in an analysis as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding.

As part of the NOP scoping process, environmental issue areas identified in the Initial Study prepared for the Project that were found to have no impact or a less-than-significant impact are provided in the Initial Study (Appendix A), and Chapter 5, Effects Found Not to Be Significant, of this Draft EIR. Thus, with the exception of the impact discussion in the Initial Study and Chapter 5 of this Draft EIR, these environmental issues are not discussed in detail in this Draft EIR:

- Aesthetics
- Agricultural and Forestry Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality (with regard to surface water or groundwater quality; drainage patterns related to erosion, surface runoff, stormwater, or flood flows; flood hazard, tsunami, or seiche zones)
- Land Use and Planning
- Mineral Resources
- Noise (with regard to airports and private airstrip noise)
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems (with regard to relocation or construction of new or expanded utilities, wastewater demand, and solid waste capacity and regulations)
- Wildfire

2.5.3 Environmental Issues Determined to be Potentially Significant

Pursuant to CEQA and CEQA Guidelines Section 15064, the discussion of potentially significant environmental impacts is focused within this Draft EIR on those impacts that the lead agency has determined could be potentially significant. A determination of those environmental impacts that would be potentially significant was made for the Project based on a review of comments received as part of the NOP scoping process and additional research and analysis of relevant information during preparation of this Draft EIR.

The scope of this Draft EIR includes environmental issues identified by the County during preparation of the NOP, as well as issues raised by public agencies in response to the NOP. The following environmental issue areas were determined to be potentially significant and are addressed at further length in this Draft EIR:

- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources

- Energy
- Greenhouse Gas Emissions
- Noise (with regard to temporary or permanent increase in ambient noise levels, and generation of excessive groundborne vibration or groundborne noise levels)
- Transportation
- Water (with regard to sustainable groundwater management, water quality control plan, or groundwater management plan, and water supplies)

2.6 Organization of this Environmental Impact Report

This Draft EIR contains all of the information required to be included in an EIR, as specified by the CEQA Statutes and Guidelines (PRC Section 21000 et seq.; 14 CCR 15000 et seq.). CEQA requires that an EIR contain, at a minimum, specified content. The following provides a quick reference in locating the CEQA-required sections within this document:

- **Chapter 1: Executive Summary.** The Executive Summary provides a summary of the Project and Project alternatives, recommended mitigation measures, and the level of significance after mitigation for each environmental issue.
- **Chapter 2: Introduction.** The Introduction provides an overview of the Project and the CEQA process, and describes the purpose, scope, and components of this Draft EIR.
- **Chapter 3: Project Description.** The Project Description provides a detailed description of the Project, including the location and Project characteristics. The intended uses of this Draft EIR, Project background, Project objectives, and required Project approvals are also addressed.
- **Chapter 4: Environmental Analysis.** The Environmental Analysis chapter analyzes the environmental impacts of the Project. Impacts are organized into major environmental topic areas. Each topic area includes a description of the environmental setting, regulatory setting, significance criteria, individual and cumulative impacts, mitigation measures, and level of significance after mitigation. The following specific environmental areas are addressed in Chapter 4:
 - Section 4.1 – Air Quality
 - Section 4.2 – Biological Resources
 - Section 4.3 – Cultural and Tribal Cultural Resources
 - Section 4.4 – Energy
 - Section 4.5 – Greenhouse Gas Emissions
 - Section 4.6 – Noise
 - Section 4.7 – Transportation
 - Section 4.8 – Water
- **Chapter 5: Effects Found Not To Be Significant.** The Effects Found Not To Be Significant chapter provides a summary of Project impacts that have been determined, through preparation of the IS, to result in less-than-significant or no impact, and therefore, further discussion is not warranted.
- **Chapter 6: Other CEQA Considerations.** The Other CEQA Considerations chapter provides a summary of significant environmental impacts, including unavoidable, irreversible, and growth-inducing impacts.

- **Chapter 7: Alternatives.** The Alternatives chapter provides a comparison of the Project’s impacts and three Project alternatives: (1) the No Project/No Development Alternative, (2) No Project/Other Development Project Alternative, and (3) the Reduced Development Intensity Alternative.
- **Chapter 8: List of Preparers.** The List of Preparers chapter provides a list of the organizations, persons consulted, and various individuals who contributed to the preparation of this Draft EIR. This section also includes a list of the lead agency personnel and technical consultants used to prepare this Draft EIR.
- **Appendices.** The technical appendices contain the NOP (including public comments), IS, and technical studies prepared to support the analyses and conclusions in this Draft EIR.

The Final EIR will be prepared after the public review period for this Draft EIR has been completed. The Final EIR will include comments and recommendations received on the Draft EIR during the public review period; a list of persons, organizations, and public agencies commenting on the Draft EIR; written responses to significant environmental issues identified in the comments received; and any other relevant information added by the County.

2.7 Documents Incorporated by Reference

Pursuant to CEQA Guidelines Section 15150, this Draft EIR references several technical studies, analyses, and previously certified environmental documents. Information from these documents, incorporated by reference, is briefly summarized in the appropriate chapters and sections. The documents that were used to prepare this Draft EIR include the following:

- San Joaquin County General Plan (2016)
- Ordinance Code of San Joaquin County (2020 [Updated])

These reference documents, in accordance with CEQA Guidelines Section 15150(b), are available for review at the following locations:

San Joaquin County General Plan

<https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=gp2035>

Ordinance Code of San Joaquin County

https://library.municode.com/ca/san_joaquin_county/codes/code_of_ordinances

2.8 Documents Prepared for the Project

The following technical studies and analyses were prepared for the Project and Project site, and are incorporated into the technical appendices of this Draft EIR:

- IS/NOP and Scoping Comments, Appendix A
- Air Quality and Greenhouse Gas Emissions Analysis Technical Report, Appendix B
- Biological Resources Constraints Assessment, Appendix C
- Cultural Resources Inventory Report, Appendix D
- Noise Technical Attachments, Appendix E

- Traffic Impact Analysis, Appendix F
- Water Supply Assessment, Appendix G

2.9 Review of the Draft Environmental Impact Report

Upon completion of this Draft EIR, the County prepared and filed a Notice of Completion with the Governor’s Office of Planning and Research, State Clearinghouse to start the public review period (PRC Section 21161). Concurrent with the Notice of Completion, the County distributed a Notice of Availability in accordance with CEQA Guidelines Section 15087. The Notice of Availability was mailed to the agencies, organizations, and individuals who previously requested in writing to receive a copy. This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities and municipalities, and all interested parties requesting a copy of this document in accordance with PRC Section 21092(b)(3). During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

In Person:

County of San Joaquin
Community Development Department
1810 East Hazelton Avenue
Stockton, California 92505

Tracy Branch Library
20 East Eaton Avenue
Tracy, California 95202

Online:

<https://www.sjgov.org/commdev/cgi-bin/cdyn.exe?grp=planning&htm=default>

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

Alisa Goulart, Associate Planner
County of San Joaquin Community Development Department
1810 East Hazelton Avenue
Stockton, California 92505
Phone: 209.468.0222
Email: alisa.goulart@sjgov.org

Upon completion of the public review period, written responses to all substantive comments regarding the adequacy of the EIR will be prepared and made available prior to a decision on the Project by the Community Development Director during the site approval process, at which the Project, the Final EIR, and the Project’s site design will be considered for approval. The comments received and the responses to those comments will be included as part of the record for consideration for the Project.

3 Project Description

This chapter of the Draft Environmental Impact Report (EIR) describes the objectives of the 14800 W. Schulte Road Logistics Center (Project) and provides a detailed description of Project characteristics. This chapter also discusses the required development approvals and discretionary actions necessary to implement the Project.

3.1 Project Location

The 37.96-acre Project site is located at 14800 West Schulte Road within southwestern unincorporated San Joaquin County, California (Figure 3-1, Regional Map). The Project site lies outside of the boundaries of the City of Tracy but within its Sphere of Influence (Figure 3-2, Project Location). It is composed of one parcel (Assessor's Parcel Number 209-240-23), located at the northwestern corner of the intersection of West Schulte Road and Quality Road (Figure 3-3, Aerial Photo of Project Site).

The Project site is located within an area containing a mix of agricultural and industrial uses (Figure 3-4, Site Plan); it is bounded by Schulte Road and agricultural uses to the north, Quality Road and agricultural uses to the east, a manufacturing/warehouse use to the south, and a warehouse/distribution use to the west. Regional access to the Project site is provided by Interstate (I) 580 and I-205, located approximately 1.5 miles to the southwest and north, respectively, and I-5, located approximately 8 miles to the east.

The San Joaquin County General Plan Land Use Map designates the Project site as General Industrial (I/G), and the San Joaquin County Zoning Map identifies the site as General Industrial (I-G) (Figure 3-5, General Plan Land Use Designations, and Figure 3-6, Zoning Designations) (County of San Joaquin 2017). The Project site is located within the Sphere of Influence of the City of Tracy and is designated by the City of Tracy's General Plan Land Use Map as Industrial (City of Tracy 2016).

3.2 Project Setting

Under the California Environmental Quality Act (CEQA), the environmental baseline for a project is typically the physical environmental condition that exists in the vicinity of a project site when the Notice of Preparation (NOP) is published (14 CCR 15125[a]). The NOP for the Project was published on November 23, 2020, which will serve as the environmental baseline date for the Project.

San Joaquin County

The County of San Joaquin (County) is currently a leading agricultural producer in the state but is undergoing a transformation to a more industrial and service economy. The County's population is concentrated largely in its seven cities: Stockton, Tracy, Manteca, Lodi, Escalon, Ripon, and Lathrop. Tracy, Lathrop, Manteca, Ripon, and, to a lesser extent, Stockton have experienced the greatest growth because they receive the first wave of out-migration from the San Francisco Bay Area. A number of unincorporated communities, many of whose origins are traced to serving surrounding agricultural activities, function as important residential and employment centers. Stockton has traditionally been and continues to exist as the financial, governmental, cultural, and commerce center of the County. At the hub of an extensive railroad network and containing the state's largest inland deepwater port, Stockton plays a principal role in the County's economic well-being (County of San Joaquin 2016).

State Route 99 and I-5, two of the state’s major north/south roadways, pass through San Joaquin County, offering the County excellent access in both these directions. I-205 and I-580 provide direct connections to the San Francisco Bay Area to the west. Combined with three transcontinental railroads, Amtrak Service, ACE Train service, an intercity bus line, a metropolitan airport, and a port connecting to the Pacific Ocean, the County is strategically located to continue its major role in intra- and interstate trade. This regional transportation network, in conjunction with relatively low land costs, has attracted non-agriculturally related industrial development. Historically, food processing has been one of the area’s largest manufacturing activities, with a new emphasis being placed on durable goods (County of San Joaquin 2016).

Project Area

The Project site was formerly used as a biomass energy facility, which was decommissioned and demolished in 2019. Under the existing conditions, the Project site is vacant and contains bare expanses of soil interspersed with ruderal vegetation.

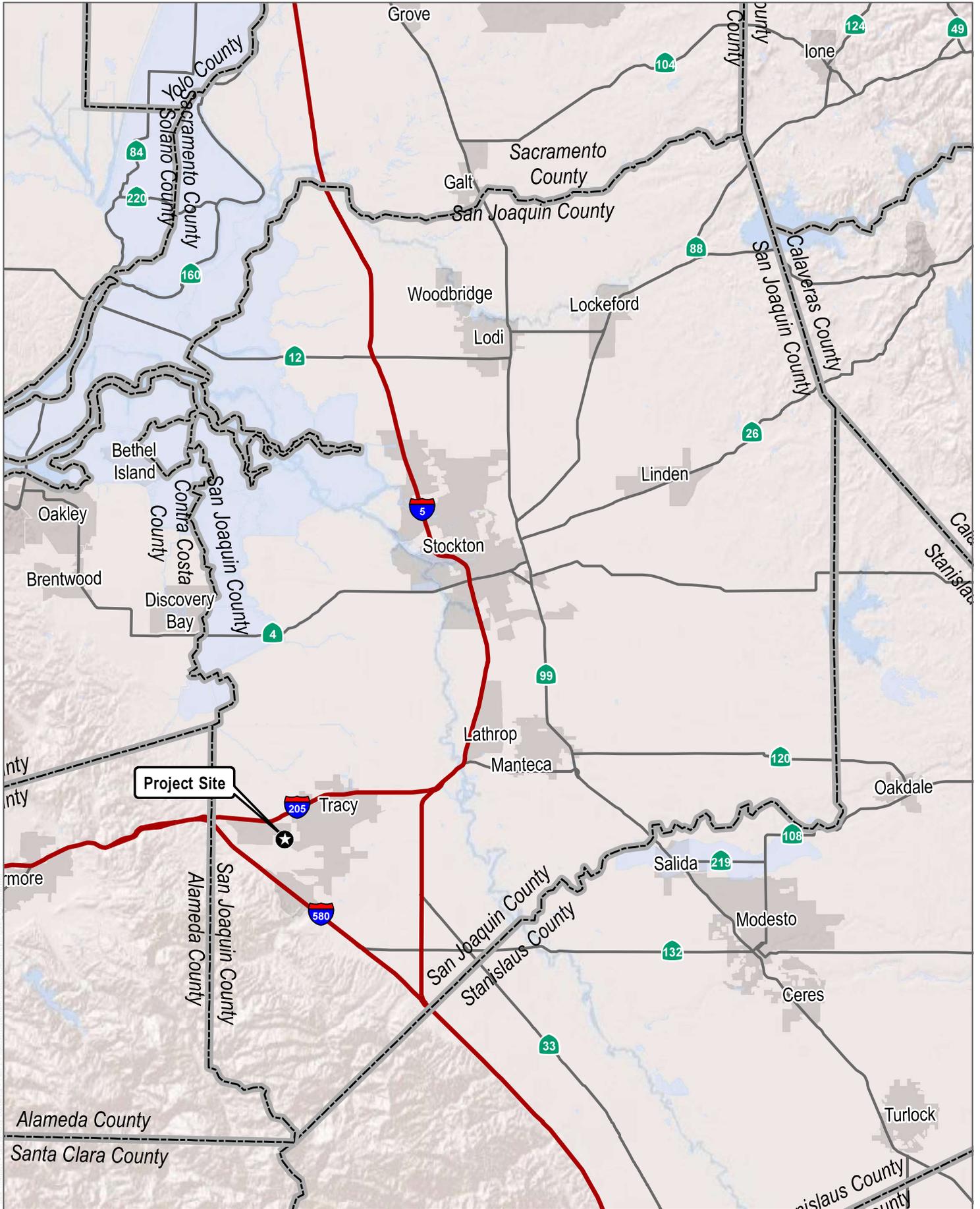
The Project site is located approximately 133 feet above mean sea level and is relatively flat; however, the Project site contains various depressions and elevated areas (ranging from approximately 5 to 25 feet in height/depth) that are the result of previous earthmoving and demolition activities. Two drainage basins are located along the northern edge of the Project site with depths of approximately 15 to 25 feet below adjacent grades. In addition, stockpiles of soil, organic material, and other aggregate base and/or rock are located on the Project site.

Land uses surrounding the Project site primarily consist of agricultural and industrial uses. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Schulte Road and agricultural uses
- **East:** Quality Road and agricultural uses
- **South:** Manufacturing/warehouse use
- **West:** Warehouse/distribution use

Cumulative Setting

In many cases, the impact of an individual project may not be significant, but its cumulative impact may be significant when combined with impacts from other related projects. Section 15355 of the CEQA Guidelines defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” CEQA Guidelines Section 15130(b) states that “the discussion [of cumulative impacts] need not provide as great detail as is provided for the effects attributable to the project alone.” Section 15130(b) further states that a cumulative impacts discussion “should be guided by standards of practicality and reasonableness.”



SOURCE: ESRI Basemaps

DUDEK



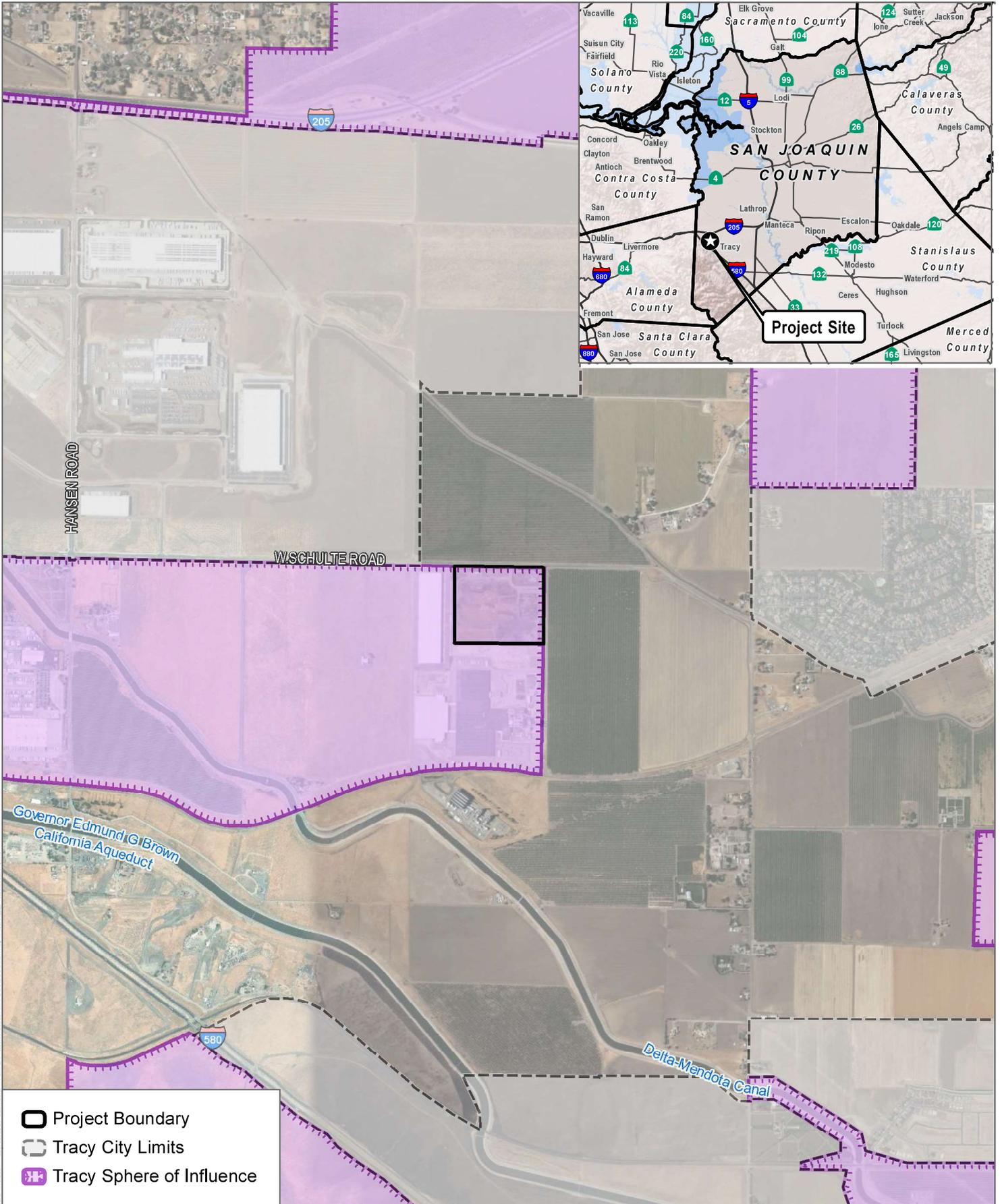
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FIGURE 3-1

Regional Map

14800 W. Schulte Road Logistics Center Project

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SOURCE: Bing Imagery (Accessed 2020), NHD (Accessed 2020)

FIGURE 3-2

Project Location

14800 W. Schulte Road Logistics Center Project

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W. SCHULTE ROAD

PAVILLION PKWY

QUALITY RD

 Project Site

SOURCE: Bing Maps 2019, San Joaquin County

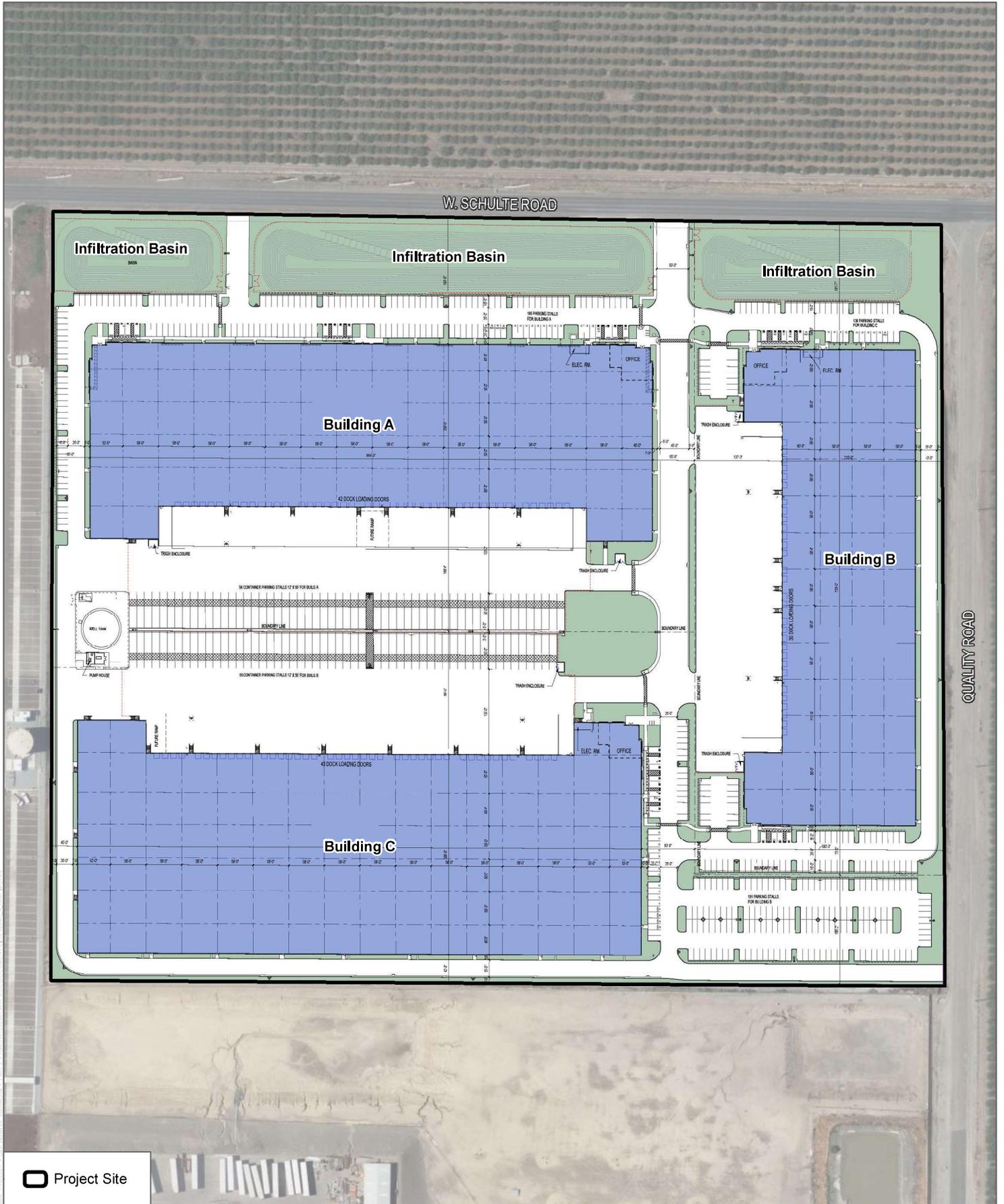


FIGURE 3-3

Aerial Photo of Project Site

14800 W. Schulte Road Logistics Center Project

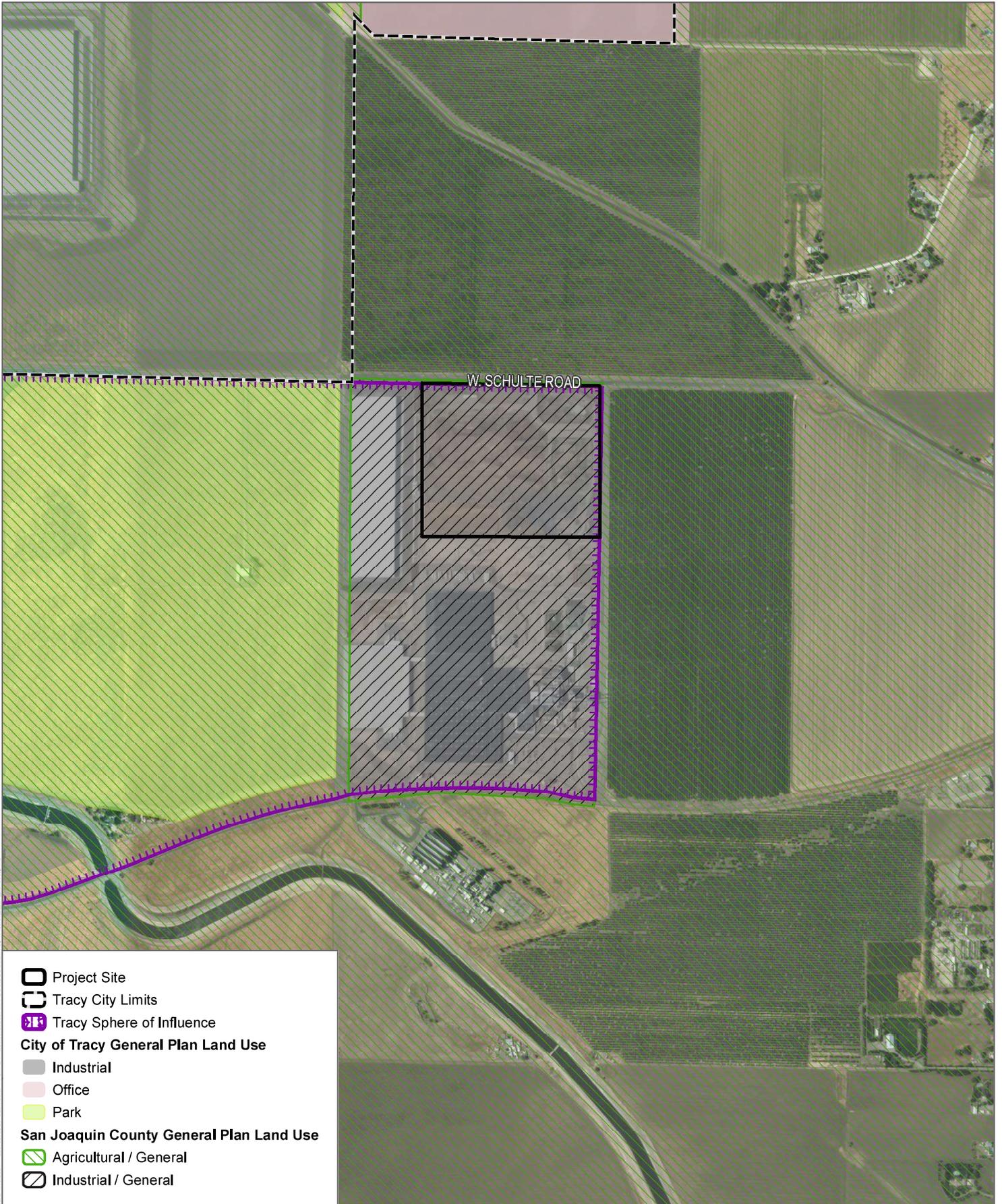
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SOURCE: Bing Maps 2019, San Joaquin County

FIGURE 3-4
Site Plan

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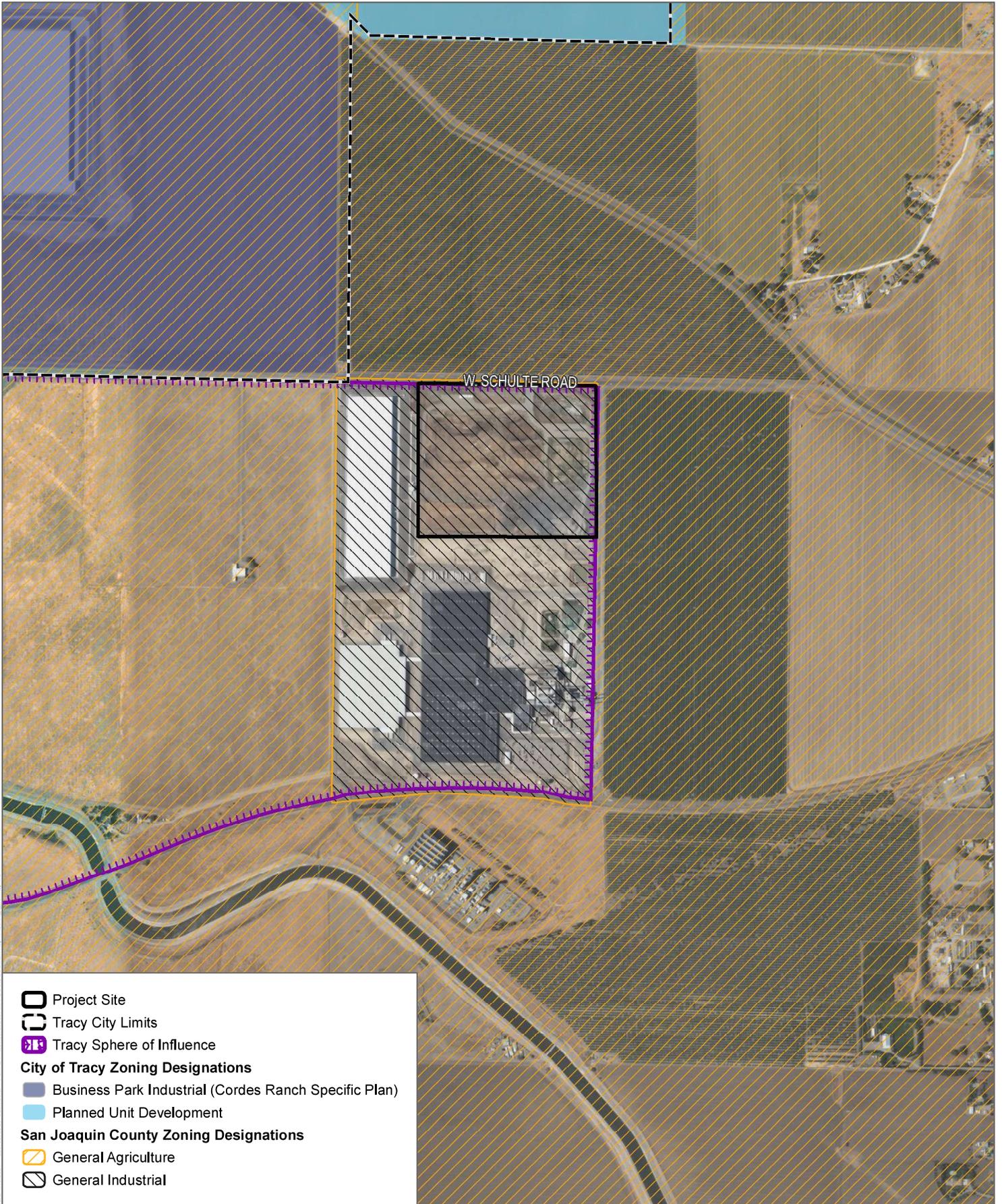
SOURCE: Bing Maps 2019, San Joaquin County

FIGURE 3-5

General Plan Land Use Designations

14800 W. Schulte Road Logistics Center Project

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SOURCE: Bing Maps 2019, San Joaquin County

FIGURE 3-6

Zoning Designations

14800 W. Schulte Road Logistics Center Project

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Cumulative impacts can also occur from the interactive effects of a single project. For example, the combination of noise and dust generated during construction activities can be additive and can have a greater impact than either noise or dust alone. However, substantial cumulative impacts more often result from the combined effect of past, present, and future projects located in proximity to a proposed project. Thus, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future projects, the impacts of which might compound or interrelate with those of the project under review.

As provided by Section 15130(b) of the CEQA Guidelines, the following elements are necessary to an adequate discussion of cumulative impacts:

- Either: (A) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency; or (B) a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or area wide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of the proposed projects.

For the analysis of cumulative impacts associated with the Project, a cumulative project list was developed through consultation with San Joaquin County Department of Public Works, Transportation Engineering Division staff during the traffic scoping process for the Traffic Impact Analysis prepared for the Project (Appendix F). The cumulative projects list is included in Section 6.0 of the Traffic Impact Analysis.

3.3 Project Objectives

Purpose and Need

Due to its strategic transportation access points, including a deepwater port and cargo-centric airport in Stockton within the Northern California Megaregion, San Joaquin County is expanding its status as a desirable setting for warehouse and logistics uses, particularly in and around the cities of Lathrop and Tracy (SJCOG 2021). Some notable companies with distribution centers in San Joaquin County include Ashley Furniture, Medline, Lowe's, Ryder, John Deere, UPS, and Amazon. This industry employs more than 20,000 workers in San Joaquin County. In the decade after the Great Recession, the growth of transportation, warehousing, and utilities has outpaced all other industries in the region. This industry sector grew 74.3% in the 5 years from 2013 to 2018, nearly twice the rate as the next highest growing industry (construction) (SJCOG 2021).

Along these lines, the Project will also assist in balancing the region's jobs:housing ratio by attracting development of warehousing and distribution centers, which can provide hundreds of jobs per million square feet of development. Conventional and e-commerce retailers are continuing to embrace the strategy of creating and staffing large regional fulfillment centers, with the goal of quickly responding to online consumers. Because of its available land and infrastructure for large logistics facilities, many companies are locating their regional operations in this area of San Joaquin County.

As such, the Project would help meet the needs of the growing logistics sector while producing new jobs in a region that historically may have been considered light on jobs and heavier on housing.

Project Objectives

Consistent with this purpose and need, the primary objectives sought by the Project are as follows:

- **Objective 1:** Develop a jobs-producing and tax-generating land use near transportation corridors within San Joaquin County that provides diverse economic opportunities for those residing and wishing to invest within southern San Joaquin County.
- **Objective 2:** Concentrate non-residential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, and industrial noise to the greatest extent feasible.
- **Objective 3:** Develop a fiscally sound and employment generating land use that maximizes utilization of an underutilized, previously developed industrially zoned parcel.
- **Objective 4:** Fulfill the existing and growing demand for logistics and warehouse uses in the region.
- **Objective 5:** Construct high-quality industrial development in an appropriate location, consistent with existing surrounding industrial land uses in the vicinity.

3.4 Proposed Project

3.4.1 Project Characteristics

The Project would involve construction and operation of three single-story warehouse buildings totaling approximately 678,913 square feet (Figure 3-4, Site Plan). Building A would be located within the northwestern one-third of the Project site and would include approximately 228,313 square feet of warehouse space and 2,968 square feet of office space (231,281 square feet of building area in total). Building B would be located within the southwestern one-third of the Project site and would include approximately 278,650 square feet of warehouse space and 3,006 square feet of office space (281,656 square feet of building area in total). Building C would be located within the eastern one-third of the Project site and would include approximately 163,012 square feet of warehouse space and 2,964 square feet of office space (165,976 square feet of building area in total).

Although the future occupants of the Project are unknown at this time, the buildings would be used for light warehousing and distribution uses as defined by the County of San Joaquin Ordinance Code (Section 9-115.585), which is most commonly warehouse and distribution operations. In general, the Project would support a variety of activities associated with the three warehouse buildings, including the ingress and egress of passenger vehicles and trucks; the loading and unloading of trucks within designated truck courts/loading areas; and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. In addition, the office space would support general internal office activities related to the warehouse uses.

Based on typical employee densities for warehousing and distribution uses, it is expected that approximately 555 employees would work on site throughout a typical workday. At this time, no refrigeration is being proposed as part of the Project, and the Project applicant currently has no plans to lease to any tenant needing refrigerated space.

3.4.2 Parking, Site Access, and On-Site and Off-Site Circulation Improvements

Single loaded truck bays would be located on the south and north sides of Buildings A and B and on the west side of Building C. As such, all loading areas would face the interior of the Project site and would not be visible from adjacent public streets. Building A would provide 42 loading docks, Building B would provide 43 loading docks, and Building C would provide 30 loading docks. Paved passenger vehicle parking areas would be provided along the northern and southeastern portions of the Project site near the frontage of Schulte Road and Quality Road. Truck/trailer parking would be provided in between Buildings A and B. Gated entry is proposed at key dock access routes for each building. In total, the Project site would provide 111 stalls for trailers and 522 standard parking spaces for passenger vehicles and trailers.

Access to the Project site would be provided via two driveways:

- Driveway 1 on Schulte Road: 30-foot-wide, full-access (passenger cars only) driveway
- Driveway 2 on Schulte Road: 50-foot-wide, full-access (passenger cars and trucks) driveway

To facilitate adequate on-site circulation and sufficient site access for passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities, the Project would involve street improvements on Schulte Road, including the addition of a right-turn lane on eastbound Schulte Road for both driveways, addition of westbound left-turn lanes along Schulte Road for both driveways, and widening a portion of westbound Schulte Road. These improvements would be constructed to accommodate the future build-out condition of Schulte Road. In addition, the Project would include internal drive aisles to facilitate on-site circulation. Emergency access would be provided via the two driveways on Schulte Road and a 25-foot-wide driveway on Quality Drive. This driveway would be exclusively for emergency access.

3.4.3 Design, Landscaping, and Lighting

The Project's design employs a variety of architectural strategies to create a contemporary, unified, and high-quality logistics center environment. Building facades would feature a complementary neutral color palette and a variety of building materials, similar to other industrial development located throughout the region. The three buildings and associated improvements were designed with strong and appropriately scaled architectural and landscape elements. Building elevations include vertical and horizontal elements that would break up the overall massing of the buildings (Figure 3-7, Representative Architectural Elevations, and Figures 3-8A through 3-8C, Representative Architectural Renderings).

The Project would feature a variety of trees, shrubs, plants, and land covers throughout the Project site to soften views of the Project site and to enhance the visual quality of the Project. A variety of development features would be provided through site design (e.g., building orientation, screening, and placement of service areas), architecture (e.g., mass, scale, form, style, material, and color), and streetscape elements (e.g., lighting and paving materials).

3.4.4 Utility Improvements

A new, engineered stormwater drainage system would be constructed on the Project site to collect and treat on-site stormwater. After development, a majority of stormwater from the Project site would drain into three below-grade,

open, earthen infiltration basins within the north portion of the site. Stormwater flows would be conveyed via sheet flows away from buildings and, where possible, through below-grade, landscaped areas prior to entering the nearest catch basin and subsequently being conveyed to the three earthen detention basins. The landscaped areas would act as the first filter for detaining suspended solids in stormwater flows. The detention basins would be planted with native grasses and erosion control vegetation along their side banks. Stormwater flows collected by the detention basins would be allowed to infiltrate into the soils, recharging the underlying groundwater basin (San Joaquin Valley Basin).

The Project and its new stormwater drainage system would be sized to capture and treat all on-site stormwater generated by two consecutive 10-year, 24-hour storm events, as required by the County. The detention basins would feature an earthen bottom that would allow flows collected by the detention basins to infiltrate into the soils and recharge the underlying groundwater basin.

Domestic, irrigation, and fire suppression water would be sourced on the Project site through the installation of two on-site water wells. The Project would include a 500,000-gallon aboveground water storage tank that would be reserved for fire suppression uses only.

Wastewater generated by each of the three buildings would be directed to individual on-site septic tanks and associated leach fields.

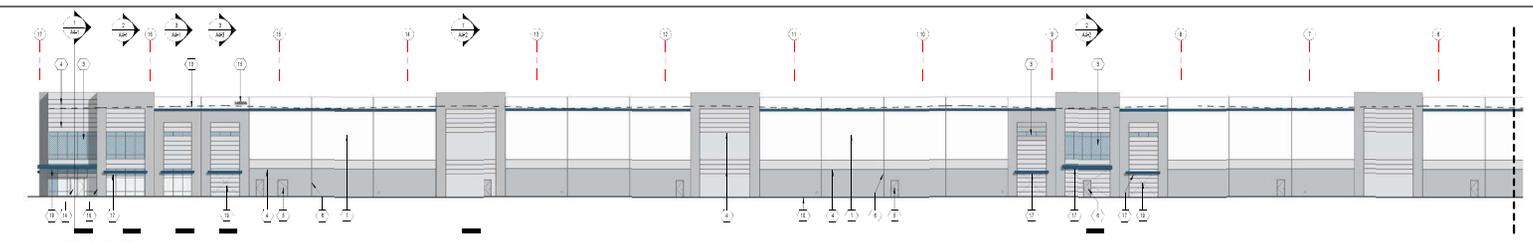
3.4.5 Project Construction

Construction is expected to commence in 2021 and would last through 2022. It is anticipated that soil quantities would be balanced on site during grading activities.

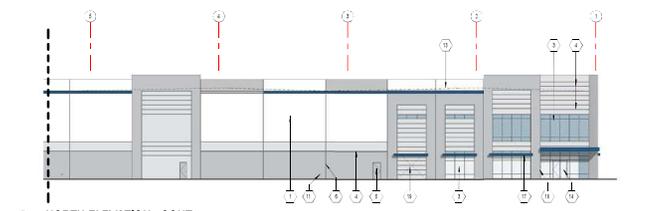
Based on information provided by the Project applicant, it is assumed that construction of the Project would commence in or around July 2021 and would last approximately 10 months, ending in or around April 2022. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site Preparation: 2 weeks (July 1, 2021 – July 15, 2021)
- Grading: 1 month (July 16, 2021 – August 31, 2021)
- Building Construction: 7 months (September 1, 2021 – March 30, 2022)
- Paving: 1 month (April 1, 2022 – April 30, 2022)
- Architectural Coating: 3 months (February 1, 2022 – April 30, 2022)

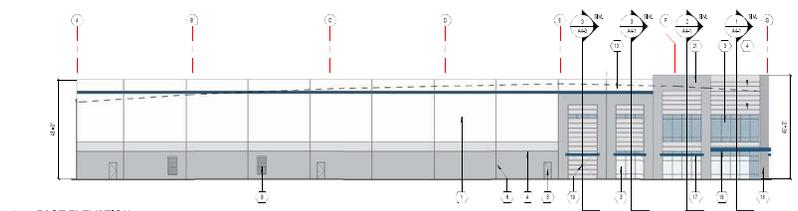
Grading would include 37.47 acres and balanced cut and fill. The construction equipment mix and vehicle trips used for estimating the Project-generated construction emissions are shown in Table 4.1-6 in Section 4.1, Air Quality.



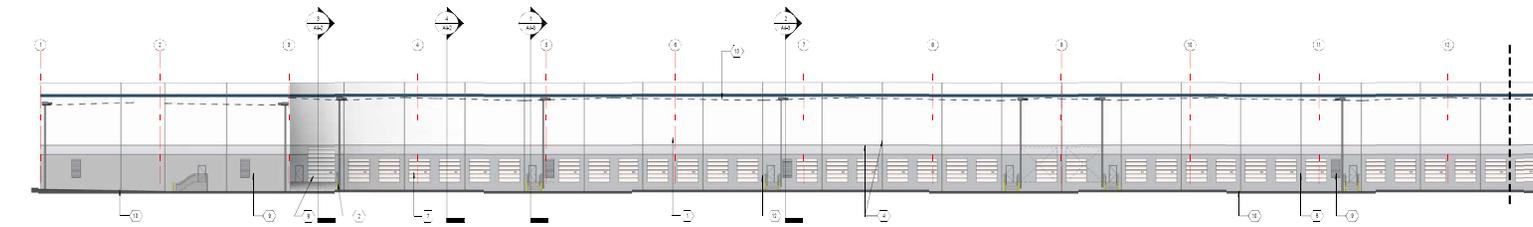
1 NORTH ELEVATION
1" = 32'-0"



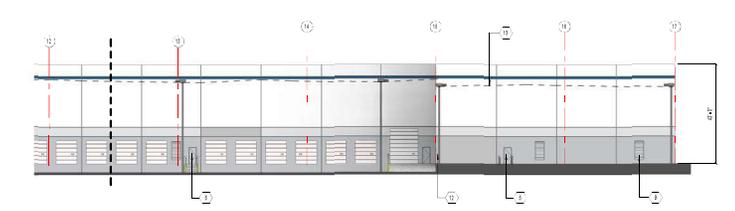
2 NORTH ELEVATION - CONT.
1" = 32'-0"



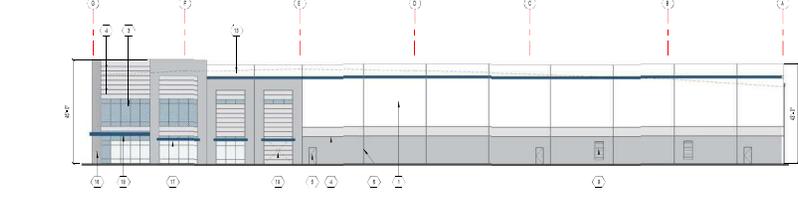
3 EAST ELEVATION
1" = 32'-0"



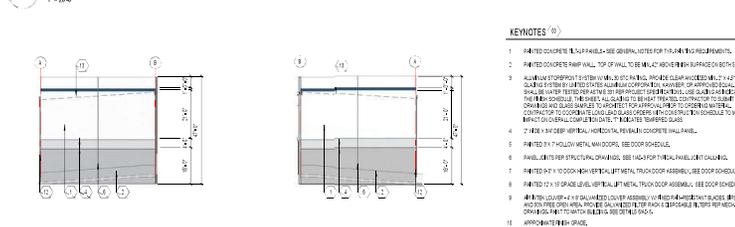
4 SOUTH ELEVATION
1" = 32'-0"



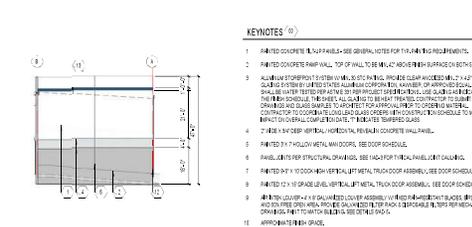
5 SOUTH ELEVATION - CONT.
1" = 32'-0"



6 WEST ELEVATION
1" = 32'-0"



7 SIDE ELEVATION
1" = 32'-0"



8 SIDE ELEVATION
1" = 32'-0"

KEYNOTES (K)

1. FINISH CONCRETE WALL PANELS - SEE GENERAL NOTES FOR FINISH AND PROFILES.
2. FINISH COLORED BRICK WALL TOP OF WALL TO BE MATCHED TO EXISTING SURROUNDING LEVEL.
3. ALUMINUM WINDOW SYSTEMS MUST BE SPECIFICALLY PROFILED TO ACCOMMODATE 1/2" AIR GAPS. GAPS OF 3/8" TO 5/8" MUST BE MAINTAINED THROUGHOUT. FINISHES OF INTERIOR WALLS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED. USE SUBSTITUTES FOR FINISHES UNLESS OTHERWISE SPECIFIED. ALL FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY FINISHES WITH ARCHITECT PRIOR TO CONSTRUCTION. FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
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23. FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
24. FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.

GENERAL NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND FINISHES SHALL BE AS SHOWN ON THESE ELEVATIONS.
2. ALL FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
3. ALL FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
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23. ALL FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
24. ALL FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.

PAINT COLOR LEGEND

[Color Swatch]	1. W/BE COUP	2. W/BE REBUILT W/BE
[Color Swatch]	3. W/BE ACENT COUP	4. W/BE TO COUP
[Color Swatch]	5. W/BE ACENT COUP	6. W/BE STEEL GRAY
[Color Swatch]	7. W/BE ACENT COUP	8. W/BE STEEL GRAY
[Color Swatch]	9. W/BE ACENT COUP	10. W/BE STEEL GRAY
[Color Swatch]	11. W/BE ACENT COUP	12. W/BE STEEL GRAY
[Color Swatch]	13. W/BE ACENT COUP	14. W/BE STEEL GRAY
[Color Swatch]	15. W/BE ACENT COUP	16. W/BE STEEL GRAY
[Color Swatch]	17. W/BE ACENT COUP	18. W/BE STEEL GRAY
[Color Swatch]	19. W/BE ACENT COUP	20. W/BE STEEL GRAY
[Color Swatch]	21. W/BE ACENT COUP	22. W/BE STEEL GRAY
[Color Swatch]	23. W/BE ACENT COUP	24. W/BE STEEL GRAY

SOURCE: RGA Office of Architectural Design 2020



FIGURE 3-7
Representative Architectural Elevations
14800 W. Schulte Road Logistics Center Project

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SOURCE:RGA Office of Architectural Design 2020

FIGURE 3-8A

Representative Architectural Renderings - Building A

14800 W. Schulte Road Logistics Center Project

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SOURCE:RGA Office of Architectural Design 2020

DUDEK

FIGURE 3-8B

Representative Architectural Renderings - Building B

14800 W. Schulte Road Logistics Center Project

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SOURCE:RGA Office of Architectural Design 2020

DUDEK

FIGURE 3-8C

Representative Architectural Renderings - Building C

14800 W. Schulte Road Logistics Center Project

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3.5 Standard Requirements and Conditions of Approval

The Project has been reviewed in detail by County staff. Various County departments and divisions are responsible for reviewing land use applications for compliance with County codes and regulations. These departments and divisions were also responsible for reviewing this Draft EIR for technical accuracy and compliance with CEQA. The following County departments and divisions were responsible for technical review:

- County of San Joaquin, Community Development Department
- County of San Joaquin, Environmental Health Department
- County of San Joaquin, Public Works Department
- South San Joaquin County Fire Authority

This review of the Project by the County departments and divisions listed above resulted in a comprehensive set of draft Conditions of Approval that will be available for public review prior to consideration of the Project by the Community Development Director. These conditions will be considered in conjunction with consideration of the Project. If approved, the Project will be required to comply with all imposed Conditions of Approval.

Where applicable, Conditions of Approval and other applicable regulations, codes, and requirements to which the Project is required to comply and that result in the reduction or avoidance of an environmental impact are specified in each subsection of Chapter 4, Environmental Analysis, of this Draft EIR. In addition, the Project is required by state law to comply with the California Building Standards Code and its CALGreen component (Title 24), which includes mandatory building standards aimed at reducing energy use.

3.6 Requested Actions

Project implementation would require approval of a Site Approval and issuance of building permits from the County.

3.7 References Cited

City of Tracy. 2016. "City of Tracy, California, General Plan Land Use Designations, Figure 2-2." June 2016.
https://www.ci.tracy.ca.us/documents/General_Plan_Land_Use_Designation_Map_PDF.pdf.

County of San Joaquin. 2016. San Joaquin County General Plan: Part 2, Overview of San Joaquin County. December 2016. https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/General%20Plan%202035/Part%202_Overview_2016_11-18.pdf.

County of San Joaquin. 2017. San Joaquin County General Plan: Land Use Element. March 2017.
https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/General%20Plan%202035/Part%203.1a_Land%20Use_2017-03-13.pdf.

SJCOG (San Joaquin Council of Governments). 2021. "Industry Overview." Accessed January 2021.
<https://www.sjcog.org/389/Warehousing-and-Logistics>.

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4 Environmental Analysis

The purpose of this Draft Environmental Impact Report (EIR) is to evaluate the potential environmental effects of construction and operation of the 14800 W. Schulte Road Logistics Center (Project). The County of San Joaquin (County) circulated a Notice of Preparation (NOP) beginning on November 23, 2020, with the public review period ending on December 22, 2020. The NOP was transmitted to the State Clearinghouse, responsible and trustee agencies, other affected agencies, and other public and private potential stakeholders to solicit feedback regarding the scope of the environmental analysis to be addressed in the Project's Draft EIR. The NOP, Initial Study, and comment letters received are contained in Appendix A of this Draft EIR.

Sections 4.1 through 4.7 of this Draft EIR contain the potential environmental impacts analysis associated with implementation of the Project, and focus on the following issues:

- Section 4.1 – Air Quality
- Section 4.2 – Biological Resources
- Section 4.3 – Cultural and Tribal Cultural Resources
- Section 4.4 – Energy
- Section 4.5 – Greenhouse Gas Emissions
- Section 4.6 – Noise
- Section 4.7 – Transportation
- Section 4.8 – Water

Technical Studies

Technical studies were prepared to analyze air quality and greenhouse gas emissions, health risks, biological resources, cultural and tribal cultural resources, energy consumption, hazards and hazardous materials, hydrology and water quality, noise, traffic, and water supply impacts, and were used in the preparation of this Draft EIR. These documents are identified in the discussions for the individual environmental issues. They are included as technical appendices to this Draft EIR and are also available at County offices.

Analysis Format

The Draft EIR assesses how the Project would impact each of the above-listed resource areas. Each environmental issue addressed in this Draft EIR is presented in terms of the following subsections:

- **Existing Conditions:** Provides information describing the existing setting on and/or surrounding the Project site that may be subject to change as a result of implementation of the Project. This setting discussion describes the conditions that existed when the NOP was published.
- **Relevant Plans, Policies, and Ordinances:** Provides a discussion of federal, state, regional, and local regulations, plans, policies, and ordinances applicable to the Project.
- **Thresholds of Significance:** Provides criteria for determining the significance of Project impacts for each environmental issue.

- **Impacts Analysis:** Provides a discussion of the characteristics of the Project that may have an impact on the environment, analyzes the nature and extent to which the Project is expected to change the existing environment, and indicates whether the Project’s impacts would meet or exceed the levels of significance thresholds.
- **Mitigation Measures and Level of Significance After Mitigation:** Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, adverse environmental impacts that are not significant, and beneficial impacts, and summarizes final levels of significance after implementation of project-specific mitigation.
- **References Cited:** Lists the sources cited during preparation of the Draft EIR.

4.1 Air Quality

This section describes the existing air quality conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared by Dudek in January 2021 (Appendix B).
- Traffic Impact Analysis prepared by Advanced Mobility Group in December 2020 (Appendix F).

4.1.1 Existing Conditions

Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Meteorological and topographical conditions, however, also are important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of criteria air pollutants. The analysis was prepared in accordance with the San Joaquin Valley Air Pollution Control District (SJVAPCD) Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD Guidance) (SJVAPCD 2015a). These factors are described below.

Topography

The Project lies within the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties and is spread across 25,000 square miles of Central California. The SJVAB is bordered on the east by the Sierra Nevada (8,000 to 14,491 feet in elevation), on the west by the Coast Ranges (averaging 3,000 feet in elevation), and to the south by the Tehachapi Mountains (6,000 to 7,981 feet in elevation). San Joaquin Valley comprises the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide, with a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where San Joaquin Valley opens to the San Francisco Bay at the Carquinez Strait. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The region's topographic features restrict air movement through and out of the SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (County of San Joaquin 2014).

Climate

San Joaquin Valley is in a Mediterranean Climate Zone, influenced by a subtropical high-pressure cell most of the year and characterized by warm, dry summers and cooler winters. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summertime maximum temperatures in San Joaquin Valley often exceed 100°F.

The vertical dispersion of air pollutants in San Joaquin Valley can be limited by the presence of persistent temperature inversions. Air temperatures usually decrease with an increase in altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. A temperature inversion can act like a lid, restricting vertical mixing of air above and below an inversion because of differences in air density and thereby trapping air pollutants below the inversion. The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions. Most of the surrounding mountains are above the normal height of summer inversions (1,500–3,000 feet). Wintertime high-pressure events can often last many weeks, with surface temperatures often lowering into the 30s°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (County of San Joaquin 2014).

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Winds in San Joaquin Valley most frequently blow from the northwesterly direction, especially in the summer. The region's topographic features restrict air movement and channel the air mass toward the southeastern end of San Joaquin Valley. Marine air can flow into the SJVAB from the Sacramento–San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow through San Joaquin Valley, over the Tehachapi Pass, into the Mojave Desert Air Basin. The Coastal Range and the Sierra Nevada are barriers to air movement to the west and east, respectively. A secondary but significant summer wind pattern is from the southeasterly direction and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons. During winter, winds can be very weak, which minimizes the transport of pollutants and results in stagnation events.

Two significant diurnal wind cycles that occur frequently in San Joaquin Valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down San Joaquin Valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can re-circulate a polluted air mass for an extended period (County of San Joaquin 2014).

Temperature, Sunlight, and Ozone Production

Solar radiation and temperature are particularly important in the chemistry of ozone (O₃) formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily O₃) results from atmospheric reactive organic gases (ROGs) and nitrogen dioxide (NO₂) under the influence of sunlight. O₃ concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. O₃ levels typically peak in the afternoon. After the sun goes down, the chemical reaction between oxides of nitrogen (NO_x) and O₃ begins to dominate. This reaction tends to reduce O₃ concentrations in the metropolitan areas through the early morning hours. At sunrise, NO_x tends to peak, partly due to low levels of O₃ at this time, and also due to the morning commuter vehicle emissions of NO_x.

Reaction rates generally increase with temperature, which results in greater O₃ production at higher temperatures. However, extremely hot temperatures can “lift” or “break” the inversion layer. Typically, if the inversion layer remains intact, O₃ levels peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, O₃ levels peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB. O₃ levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (County of San Joaquin 2014).

Precipitation, Humidity, and Fog

Precipitation and fog can result in the reduction or increase in some pollutant concentrations. For instance, O₃ needs sunlight for its formation, and clouds and fog can block the required solar radiation. In addition, wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Fog with less moisture content, however, can contribute to the formation of secondary ammonium nitrate particulate matter.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations. Between winter storms, high pressure and light winds allow cold, moist air to pool on the San Joaquin Valley floor, resulting in 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 particulate matter.

Urban Heat Island Effect

The “urban heat island” refers to the effect of urbanized areas on surface and air temperature compared to their rural surroundings. Buildings, roads, and other “hardscape” create an island of higher temperatures within the regional landscape. As described by the U.S. Environmental Protection Agency (EPA), “[u]rban heat islands are caused by development and the changes in radiative and thermal properties of urban infrastructure as well as the impacts buildings can have on the local microclimate—for example tall buildings can slow the rate at which cities cool off at night. Heat islands are influenced by a city’s geographic location and by local weather patterns, and their intensity changes on a daily and seasonal basis” (EPA 2008). The term is generally used to refer to community-wide effects, particularly for large metropolitan cities. The potential adverse effects of the urban heat island effect include increased energy consumption, elevated emissions of air pollutants and greenhouse gases (GHGs), compromised human health and comfort, and impaired water quality. Increased temperatures due to the urban heat island effect may also lead to increased energy consumption, which has implications for air quality and GHG emissions. In addition to energy-related increases in air emissions, elevated air temperatures increase the rate of ground-level O₃ formation. Communities have adopted various strategies to deal with these environmental impacts, such as increasing vegetation and using more energy-efficient building materials. These strategies are often part of more general energy savings or “sustainability” practices and are not identified as “urban heat island effect” mitigation, but nevertheless they provide the benefits of reducing surface and atmospheric heat islands.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O₃, NO₂, carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), and lead. ROGs (also referred to as volatile organic compounds [VOCs])¹ and NO_x are also important because they are precursors to O₃. These pollutants, as well as toxic air

¹ The SJVAPCD threshold is set for ROG. However, ROG and VOC are generally considered equivalent for CEQA analyses; as such, ROG and VOC are used interchangeably in this analysis.

contaminants (TACs), are discussed in the following paragraphs.² In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. A more detailed discussion of health effects of criteria air pollutants is provided in Appendix B.

Ozone. O₃ in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O₃ at levels typically observed in the region can result in breathing pattern changes, reduction of breathing capacity, respiratory symptoms, worsening of lung disease leading to premature death, increased susceptibility to infections, inflammation of and damage to the lung tissue, and some immunological changes (CARB 2019a; EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, older adults, and young children.

Inhalation of O₃ causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O₃ can reduce the volume of air that the lungs breathe in and cause shortness of breath. O₃ in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O₃ exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O₃ exposure. Although there are relatively few studies of O₃'s effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O₃ and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O₃ concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019a).

A number of population groups are potentially at increased risk for O₃ exposure effects. In the ongoing review of O₃, the EPA has identified populations as having increased risk from O₃ exposures: individuals with asthma, younger and older age groups, individuals with reduced intake of certain nutrients such as Vitamins C and E, and outdoor workers. There is suggestive evidence for other potential factors, such as variations in genes related to oxidative metabolism or inflammation, gender, socioeconomic status, and obesity. However further evidence is needed (SCAQMD 2017).

The adverse effects reported with short-term O₃ exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O₃ reaching the lungs (SCAQMD 2017).

Nitrogen Dioxide. A large body of health science literature indicates that exposure to NO₂ can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO₂, results from controlled human exposure studies that show that NO₂ can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO₂ than adults due to their greater

² The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA's Criteria Air Pollutants (EPA 2016) and the CARB Glossary of Air Pollutant Terms (CARB 2016a).

breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO₂ exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019b).

Carbon Monoxide. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, and light-headedness and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, older adults, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019c).

Sulfur Dioxide. SO₂ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter (PM), SO₂ can injure lung tissue and reduce visibility and the level of sunlight. SO₂ can worsen asthma resulting in increased symptoms, increased medication usage, and emergency room visits.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO₂ exposure compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during physical activity. Also, exposure at elevated levels of SO₂ (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older adults and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019d).

SO₂ is of concern because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in PM (NRC 2005). People with asthma are of particular concern because they have increased baseline airflow resistance and because their SO₂-induced increase in resistance is greater than in healthy people and it increases with the severity of their asthma (NRC 2005). SO₂ is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. A number of adverse health effects have been associated with exposure to PM_{2.5} and PM₁₀. For PM_{2.5}, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, PM_{2.5} is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide based on the World Health Organization's Global Burden of Disease Project (WHO 2018). Short-term exposures to PM₁₀ have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2017).

Long-term (months to years) exposure to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM₁₀ are less clear, although several studies suggest a link between long-term PM₁₀ exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that PM in outdoor air pollution causes lung cancer (CARB 2017).

People with influenza, people with chronic respiratory and cardiovascular diseases, and older adults may suffer worsening illness and premature death as a result of breathing PM. People with bronchitis can expect aggravated symptoms from breathing PM. Children may experience a decline in lung function due to breathing in PM₁₀ and PM_{2.5} (EPA 2009).

PM encompasses a physically and chemically diverse class of ambient air pollutants of both anthropogenic and biological origin. The PM standard is the only National Ambient Air Quality Standard (NAAQS) that does not target a specific chemical or family of chemical species (NRC 2005). The range of human health effects associated with ambient PM levels or demonstrated in laboratory studies has expanded from earlier concerns for total mortality and respiratory morbidity to include cardiac mortality and morbidity, blood vessel constriction, stroke, premature birth, low birth weight, retarded lung growth, enhancement of allergic responses, reduced resistance to infection, degenerative lesions in the brain, and lung cancer (EPA 2004).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Reactive Organic Gases. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O₃ are referred to and regulated as ROG_s (also referred to as VOC_s). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of ROG_s result from the formation of O₃ and its related health effects. High levels of ROG_s in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TAC_s. There are no separate health standards for ROG_s as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancerous health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics “Hot Spots” Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of PM_{2.5} (CARB 2016b). DPM is typically composed of carbon particles (“soot,” also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016b). The California Air Resources Board (CARB) classified “particulate emissions from diesel-fueled engines” (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM_{2.5}, DPM also contributes to the same noncancerous health effects as PM_{2.5} exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to noncancerous health effects are children whose lungs are still developing and older adults who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person’s reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. *Coccidioidomycosis*, more commonly known as “Valley Fever,” is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils. The fungus is very prevalent in the soils of California’s San Joaquin Valley. Per the California Department of Public Health, the range over 8 years (2011–2018) for coccidioidomycosis cases in San Joaquin County was 7.2 to 31.6 cases per 100,000 people per year. Statewide incidences in 2018 were 18.8 per 100,000 people (CDPH 2019).

The Project would be required to comply with Rule 8021, Section 6.3, which would require the Project to develop, prepare, submit, obtain approval of, and implement a dust control plan.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, older adults, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The SJVAPCD identifies sensitive receptors as facilities that house or attract children, older adults, people with illnesses, hospitals, schools, convalescent facilities, and residential areas (SJVAPCD 2000). The closest off-site sensitive receptor to the Project site is a residence located 1,360 feet west of the Project site.

4.1.2 Relevant Plans, Policies, and Ordinances

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O₃ protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O₃, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O₃, NO₂, SO₂, PM₁₀, and PM_{2.5} are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan (SIP) that demonstrates how those areas will attain the NAAQS within mandated time frames. A more detailed discussion of the NAAQS, as well as the California Ambient Air Quality Standards (CAAQS) (discussed below), is provided in Appendix B.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify national emission standards for HAPs to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established the CAAQS, which are generally more restrictive than the NAAQS. An ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility-reducing particles are values that are not to be exceeded.

The SJVAPCD based its thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.1-1.

Table 4.1-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
O ₃	1 hour	0.09 ppm (180 µg/m ³)	—	Same as Primary Standard ^f
	8 hours	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³) ^f	
NO ₂ ^g	1 hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
CO	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	None
	8 hours	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	

Table 4.1-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
SO ₂ ^h	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m ³)
	24 hours	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ^g	—
	Annual	—	0.030 ppm (for certain areas) ^g	—
PM ₁₀ ⁱ	24 hours	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	—	
PM _{2.5} ⁱ	24 hours	—	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
Lead ^{j,k}	30-day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas) ^k	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride ^l	24 hours	0.01 ppm (26 µg/m ³)	—	—
Sulfates	24- hours	25 µg/m ³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016c.

Notes: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; ppm = parts per million by volume; O₃ = ozone; NO₂ = nitrogen dioxide; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns; PM_{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

^a California standards for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than O₃, NO₂, SO₂, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

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

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

- e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- h On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- i On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the federal HAPs. In 1987, the Legislature enacted the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of

those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Safety Training on Valley Fever Assembly Bill 203

AB 203 adds Section 6709 to the Labor Code and requires employers to provide effective Valley Fever awareness and prevention training for all construction employees at risk of prolonged exposure to dust in Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties annually and again before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance.

Local

San Joaquin Valley Air Pollution Control District

The SJVAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SJVAB. The SJVAPCD jurisdiction includes all of Merced, San Joaquin, Stanislaus, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County.

Air Quality Plans

The SJVAPCD has prepared several air quality attainment plans to achieve the O₃ and PM standards, the most recent of which include the 2020 Reasonably Available Control Technology Demonstration for the 2015 8-Hour Ozone Standard (SJVAPCD 2020a); 2016 Plan for the 2008 8-Hour Ozone Standard (SJVAPCD 2016a); 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (SJVAPCD 2014a); 2013 Plan for the Revoked 1-Hour Ozone Standard (SJVAPCD 2013); 2007 PM₁₀ Maintenance Plan and Request for Redesignation (SJVAPCD 2007a); 2012 PM_{2.5} Plan (SJVAPCD 2012); 2015 Plan for the 1997 PM_{2.5} Standard (SJVAPCD 2015b); 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard (SJVAPCD 2016b); and the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards (SJVAPCD 2020b). The following sections summarize key elements of these and other recent air quality attainment plans.

Extreme 1-Hour Ozone Attainment Demonstration Plan

The Extreme 1-Hour Ozone Attainment Demonstration Plan, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal 1-hour O₃ standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the EPA on March 8, 2010; however, the EPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (*Sierra Club v. EPA*, 671 F.3d 955) remanding EPA's approval of these SIP revisions. Concurrent with the EPA's final rule, CARB withdrew the 2004 plan. The SJVAPCD developed a new plan for the 1-hour O₃ standard, the 2013 Plan for the Revoked 1-Hour Ozone Standard, which it adopted in September 2013.

2007 8-Hour Ozone Plan

The 2007 8-Hour Ozone Plan, adopted by the Governing Board on April 30, 2007, sets forth measures and a “dual path” strategy to attain the federal 1997 8-hour O₃ standard by 2023 for the SJVAB by reducing emissions of O₃ and PM precursors (SJVAPCD 2007b). The plan also includes provisions for improved pollution control technologies for mobile and stationary sources, as well as an increase in state and federal funding for incentive-based measures

to reduce emissions. All local measures would have been adopted by the SJVAPCD before 2012. This plan was approved by the EPA on April 30, 2012. On November 26, 2012, however, the EPA withdrew its determination that the plan satisfied the federal Clean Air Act requirements regarding emissions growth caused by growth in vehicle miles traveled. All other determinations in the EPA's March 1, 2012, rule approving the plan remain unchanged and in effect. The SJVAPCD is currently in the process of developing an O₃ plan to address EPA's 2008 8-hour O₃ standard, with attainment required by 2032.

2009 Reasonably Available Control Technology State Implementation Plan

On April 16, 2009, the Governing Board adopted the Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP) (SJVAPCD 2009). In part, the 2009 RACT SIP satisfied the commitment by the SJVAPCD for a new RACT analysis for the 1-hour O₃ plan (see discussion of the EPA withdrawal of approval in the Extreme 1-Hour Ozone Attainment Demonstration Plan summary above) and was intended to prevent all sanctions that could be imposed by the EPA for failure to submit a required SIP revision for the 1-hour O₃ standard. With respect to the 8-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme O₃ nonattainment area), evaluates SJVAPCD rules against new Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and rule amendments that had been adopted by the Governing Board since August 17, 2006, for RACT consistency.

2013 Plan for the Revoked 1-Hour Ozone Standard

The SJVAPCD developed a plan for EPA's revoked 1-hour O₃ standard after the EPA withdrew its approval of the 2004 Extreme 1-Hour Ozone Attainment Demonstration Plan as a result of litigation. As a result of the litigation, the EPA reinstated previously revoked requirements for 1-hour O₃ attainment plans. The 2013 plan addresses those requirements, including a demonstration of implementation of reasonably available control measures and a demonstration of a rate of progress averaging 3% annual reductions of ROG or NO_x emissions every 3 years. The 2013 Plan for the Revoked 1-Hour Ozone Standard was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013).

2014 RACT SIP

On June 19, 2014, the Governing Board adopted the 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (2014 RACT SIP) (SJVAPCD 2014a). The 2014 RACT SIP includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NO_x reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance SJVAB's O₃ attainment. Each ROG (i.e., VOC) rule evaluated in the 2009 RACT SIP, however, has been subsequently approved by the EPA as meeting RACT within the last 2 years. The O₃ attainment strategy, therefore, focuses on further NO_x reductions.

SJVAPCD 2016 Plan for the 2008 8-Hour Ozone Standard

The SJVAPCD adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016. This plan demonstrates the practicable and expeditious attainment of the 75 parts per billion 8-hour O₃ standard (SJVAPCD 2016a).

SJVAPCD 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard

The SJVAPCD adopted the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard on September 15, 2016. This plan addresses the EPA federal annual PM_{2.5} standard of 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the SJVAB from Moderate nonattainment to Serious nonattainment (SJVAPCD 2016b).

SJVAPCD 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards on November 15, 2018. This plan addresses the EPA federal 1997 annual PM_{2.5} standard of 15 $\mu\text{g}/\text{m}^3$ and 24-hour PM_{2.5} standard of 65 $\mu\text{g}/\text{m}^3$, the 2006 24-hour PM_{2.5} standard of 35 $\mu\text{g}/\text{m}^3$, and the 2012 annual PM_{2.5} standard of 12 $\mu\text{g}/\text{m}^3$. This plan demonstrates attainment of the federal PM_{2.5} standards as expeditiously as practicable (SJVAPCD 2018a).

2020 RACT Demonstration

The SJVAPCD adopted the 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard on June 18, 2020. San Joaquin Valley is classified as an Extreme nonattainment area for the 2015 O₃ standard. The 2020 RACT Demonstration includes a comprehensive evaluation of all NO_x and ROG SJVAPCD rules to ensure that each rule meets or exceeds RACT. The 2020 RACT Demonstration fulfills Clean Air Act requirements and demonstrates that all federal RACT requirements continue to be satisfied in San Joaquin Valley (SJVAPCD 2020a).

Particulate Matter Attainment Plans

2007 PM₁₀ Maintenance Plan and Request for Redesignation

On September 20, 2007, the Governing Board approved the 2007 PM₁₀ Maintenance Plan and Request for Redesignation (SJVAPCD 2007a). After achieving compliance with the annual and 24-hour NAAQS for PM₁₀ during the period from 2003 to 2006,³ the SJVAPCD prepared the 2007 PM₁₀ Maintenance Plan and Request for Redesignation. The plan includes future emission estimates through 2020 and, based on modeling, projects that SJVAB will continue to attain the PM₁₀ NAAQS through 2020. The plan does not call for adoption of new control measures. Measures called for in the 2007 8-Hour Ozone Plan and 2008 PM_{2.5} Plan (discussed below) will also produce PM₁₀ benefits; however, the plan does include a contingency plan if future PM₁₀ levels were to exceed the NAAQS. It also includes a request that the EPA redesignate the SJVAB to attainment status for the PM₁₀ NAAQS. On October 25, 2007, CARB approved the SJVAPCD's plan with modifications to the transportation conformity budgets. On September 25, 2008, the EPA redesignated the SJVAB to attainment for the PM₁₀ NAAQS and approved the PM₁₀ maintenance plan.

2008 PM_{2.5} Plan

The SJVAPCD Governing Board adopted the 2008 PM_{2.5} Plan on April 30, 2008 (SJVAPCD 2008). This plan is designed to assist the SJVAB in attaining all PM_{2.5} standards, including the 1997 federal standards, the 2006 federal standards, and the state standard, as soon as possible. On July 13, 2011, the EPA issued a proposed rule partially approving and disapproving the 2008 PM_{2.5} Plan. Subsequently, on November 9, 2011, the EPA issued a final rule approving most of the plan with an effective date of January 9, 2012. However, the EPA disapproved the plan's contingency measures because they would not provide sufficient emissions reductions.

³ Attainment is achieved if the 3-year annual average PM₁₀ concentration is less than or equal to 50 $\mu\text{g}/\text{m}^3$ and the expected 24-hour exceedance days is less than or equal to 1.

2012 PM_{2.5} Plan

Approved by the Governing Board on December 20, 2012, the 2012 PM_{2.5} Plan addresses attainment of EPA's 24-hour PM_{2.5} standard of 35 µg/m³ established in 2006. In addition to reducing direct emissions of PM_{2.5}, this plan focuses on reducing emissions of NO_x, which is a predominant pollutant in the formation of PM_{2.5} in the SJVAB. The plan relies on a multilevel approach to reducing emissions through SJVAPCD efforts (industry, the general public, employers, and small businesses) and state/federal efforts (passenger vehicles, heavy-duty trucks, and off-road sources), as well as SJVAPCD and state/federal incentive programs to accelerate replacement of on- and off-road vehicles and equipment (SJVAPCD 2012).

2015 Plan for the 1997 PM_{2.5} Standard

The Governing Board adopted the 2015 Plan for the 1997 PM_{2.5} Standard on April 16, 2015 (SJVAPCD 2015b). This plan addresses the EPA's annual PM_{2.5} standard of 15 µg/m³ and 24-hour PM_{2.5} standard of 65 µg/m³ established in 1997. Although nearly achieving the 1997 standards, the SJVAB experienced higher PM_{2.5} levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions; thus, the SJVAPCD was unable to meet the attainment date of December 31, 2015. Accordingly, this plan also contains a request for a one-time extension of the attainment deadline for the 24-hour standard to 2018 and the annual standard to 2020. The plan builds on past development and implementation of effective control strategies. Consistent with EPA regulations for PM_{2.5} plans to achieve the 1997 standards, the plan contains Most Stringent Measures, Best Available Control Measures, and additional enforceable commitments for further reductions in emissions, and ensures expeditious attainment of the 1997 standard.

2016 Moderate Area Plan for the 2012 PM_{2.5} Standard

On September 15, 2016, the Governing Board adopted the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard (SJVAPCD 2016b). This plan addresses the federal mandates for areas classified as “moderate nonattainment” for the 2012 PM_{2.5} NAAQS of 12 µg/m³. Consistent with EPA's PM_{2.5} Implementation Rule, the plan satisfies the mandate to submit a moderate nonattainment plan to EPA by October 2016, demonstrates impracticability of attaining the 2012 PM_{2.5} standard by the moderate nonattainment deadline of 2021, includes a request to reclassify San Joaquin Valley to a “serious nonattainment” area for the 2012 PM_{2.5} standard, satisfies all federal Clean Air Act requirements for moderate nonattainment areas, and demonstrates that emissions are continuing to be reduced in San Joaquin Valley.

2017 Particulate Matter Plans

The SJVAPCD is in the process of developing an attainment strategy to address the 1997, 2006, and 2012 PM_{2.5} standards and a plan to demonstrate maintenance of the 1987 PM₁₀ standard, as required under the federal Clean Air Act.

Senate Bill 656 Particulate Matter Control Measure Implementation Schedule

Senate Bill (SB) 656 was enacted in 2003 and codified as California Health and Safety Code Section 39614. SB 656 seeks to reduce exposure to PM₁₀ and PM_{2.5} and to make further progress toward attainment of the NAAQS and CAAQS for PM₁₀ and PM_{2.5}. SB 656 required CARB, in consultation with local air districts, to develop and adopt lists of “the most readily available, feasible, and cost-effective” PM control measures. Subsequently, the air districts were required to adopt implementation schedules for the relevant control measures in their districts. In June 2005,

the SJVAPCD adopted its SB 656 Particulate Matter Control Measure Implementation Schedule. The SJVAPCD analysis of the CARB list concluded that all but one of the measures that apply to SJVAPCD sources had been implemented or were in one of the SJVAPCD's attainment plans for adoption within the next 2 years. The remaining measure pertains to a future amendment of a rule for gasoline transfer into stationary storage containers, delivery vessels, and bulk plants.

Applicable Rules

The SJVAPCD's primary means of implementing air quality plans is by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD's permit authority over such sources and through its review and planning activities. Unlike stationary source projects, which encompass very specific types of equipment, process parameters, throughputs, and controls, air emissions sources from land use development projects are mainly mobile sources (traffic) and area sources (small dispersed stationary and other non-mobile sources), including exempt (i.e., no permit required) sources such as consumer products, landscaping equipment, furnaces, and water heaters. Mixed-use land development projects may include nonexempt sources, including devices such as small to large boilers, stationary internal combustion engines, gas stations, and asphalt batch plants. Notwithstanding nonexempt stationary sources, which would be permitted on a case-by-case basis, SJVAPCD Regulations VIII and IX generally apply to land use development projects and are described below.

Regulation IV – Prohibitions

- Rule 4102: Nuisance – Prohibits discharge of air contaminants or other materials from any source which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- Rule 4601: Architectural Coatings – The purpose of the rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- Rule 4641: Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations – The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations.

Regulation VIII – Fugitive PM₁₀ Prohibition

- Rule 8021: Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities – The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. The rule outlines Dust Control Plan requirements for certain applicable construction activities.
- Rule 8031: Bulk Materials – The purpose of the rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials.
- Rule 8041: Carryout and Trackout – The purpose of this rule is to prevent or limit fugitive dust emissions from carryout and trackout.
- Rule 8051: Open Areas – The purpose of this rule is to limit fugitive dust emissions from open areas.
- Rule 8061: Paved and Unpaved Roads – The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria.
- Rule 8071: Unpaved Vehicle/Equipment Traffic Areas – The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas.

Pursuant to Rule 8021, Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant during Project construction.

Regulation IX – Mobile and Indirect Sources

- Rule 9110: General Conformity – The rule specifies the criteria and procedures for determining the conformity of federal actions with the San Joaquin Valley Unified Air Pollution Control District’s air quality implementation plan.
- Rule 9120: Transportation Conformity – The rule sets forth the principles for determining conformity of transportation plans, programs, and projects which are developed, funded, or approved by the United States Department of Transportation (DOT), and by metropolitan planning organizations (MPOs) or other recipients of funds under Title 23 U.S.C. or the Federal Transit Act. The rule sets forth policy, criteria, and procedures for demonstrating and assuring conformity of such activities to an applicable implementation plan developed pursuant to the Clean Air Act.
- Rule 9410: Employer Based Trip Reduction – The purpose of this rule is to reduce vehicle miles traveled (VMT) from private vehicles used by employees to commute to and from their worksites to reduce emissions of oxides of nitrogen, volatile organic compounds, and particulate matter.
- Rule 9510: Indirect Source Review (ISR) – The purpose of this rule is to fulfill the District’s emission reduction commitments in the PM₁₀ and Ozone Attainment Plans, achieve emission reductions from the construction and use of development projects through design features and on-site measures, and provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures.
- Rule 9610: State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs – The purpose of this rule is to provide an administrative mechanism for the District to achieve credit towards State Implementation Plan requirements for emission reductions achieved in the San Joaquin Valley Air Basin through incentive programs administered by the District, United States Department of Agriculture Natural Resources Conservation Service, or CARB.

Rule 9510: Indirect Source Review

The ISR rule, which was adopted December 15, 2005, and went into effect March 1, 2006, requires developers of new residential, commercial, and some industrial projects to reduce NO_x and PM₁₀ emissions generated by their projects. Pursuant to Rule 9510, the purpose of the ISR rule is to reduce emissions of NO_x and PM₁₀ from new land development projects. In general, development contributes to air pollution in the SJVAB by increasing the number of vehicles and vehicle miles traveled. ISR applies to development projects that require discretionary approval from the lead agency. The ISR rule also applies to transportation and transit projects with construction exhaust emissions that equal or exceed 2 tons per year of NO_x or PM₁₀. The ISR rule requires submittal of an air impact assessment application no later than the date on which the application is made for a final discretionary approval from the public agency. The air impact assessment contains the information necessary to calculate construction and operational emissions of a development project.

Section 6.0 of the ISR rule outlines general mitigation requirements for developments that include reduction in construction emissions of 20% of the total construction NO_x emissions, and 45% of the total construction PM₁₀ exhaust emissions. The rule also requires the Project to reduce operational NO_x emissions by 33.3% and operational PM₁₀ emissions by 50% compared to the unmitigated baseline. Section 7.0 of the ISR rule includes fee schedules

for construction or operational excess emissions of NO_x or PM₁₀—those emissions above the goals identified in Section 6.0 of the rule. Monies collected from this fee are used by the SJVAPCD to fund emissions reduction projects in the SJVAB on behalf of that project.

Currently, the SJVAPCD is proposing revisions to Rule 9510 that may affect the applicability mechanism of the ISR rule to ensure that the rule applies consistently throughout San Joaquin Valley, as well as clarification and enhancement of several other aspects of the rule.

Rule 9610: State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs

Rule 9610 provides an administrative mechanism for the SJVAPCD to receive credit toward SIP requirements for emissions reductions achieved in the SJVAB through incentive programs administered by the SJVAPCD, United States Department of Agriculture Natural Resources Conservation Service, or CARB. On April 9, 2015, the EPA finalized a limited approval and limited disapproval (for a minor administrative error) of Rule 9610 as a revision to the California SIP. Additional documentation regarding the effectiveness of SJVAPCD's incentive programs can be found in 2015 Annual Demonstration Report SIP Credit for Emission Reductions Generated Through Incentive Programs (SJVAPCD 2015c).

San Joaquin Council of Governments

The San Joaquin Council of Governments Board adopted the 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) on June 28, 2018. The RTP/SCS is comprehensive in its response to new federal statutes embodied in the Moving Ahead for Progress in the 21st Century and state statutes, including SB 375. The RTP/SCS continues to provide a sustainability vision through 2042 that recognizes the significant impact the transportation network has on the region's public health, mobility, and economic vitality. As the region's comprehensive long-range transportation planning document, the RTP/SCS serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements. The San Joaquin Council of Governments is currently preparing the 2022 RTP/SCS Update, Envision 2050 (SJCOG 2018).

County of San Joaquin

The County of San Joaquin (County) General Plan Public Health and Safety Element, Air Quality Goal is intended to protect public health and welfare by implementing measures that allow the SJVAPCD to attain federal and state air quality standards. The Public Health and Safety Element sets forth a number of policies and standards to reduce current pollutant emissions and to require new development to include measures to comply with air quality standards. The County's General Plan Public Health and Safety Element, Air Quality Goal includes the following goal and policies (County of San Joaquin 2016):

Goal PHS-5: To protect public health, agricultural crops, scenic resources, and the built and natural environments from air pollution.

Policy PHS-5.4: Innovative Mitigation Measures. The County shall encourage innovative mitigation measures and project redesign to reduce air quality impacts by coordinating with SJVAPCD, project applicants, and other interested parties.

- Policy PHS-5.5: Air District Best Performance Standards.** The County shall consider the Best Performance Standards adopted by SJVAPCD during the review of new development proposals.
- Policy PHS-5.6: Toxic Air Contaminants.** The County shall require effective buffers between residential areas and other sensitive receptors and nonresidential land uses, such as highways, trucking centers, gasoline dispensing facilities, and dry cleaners, that generate TACs.
- Policy PHS-5.7: Toxic Air Contaminant Exposure Reduction Measures for New Development.** The County shall require new development projects to implement all applicable best management practices that will reduce exposure of sensitive receptors (e.g., hospitals, schools, daycare facilities, elderly housing and convalescent facilities) to TACs.
- Policy PHS-5.8: Minimize Motor Vehicle Emissions.** The County shall strive to minimize motor vehicle emissions through land use and transportation strategies, as well as by promotion of alternative fuels.
- Policy PHS-5.9: Particulate Emissions from Construction.** The County shall support SJVAPCD efforts to reduce PM₁₀ and PM_{2.5} emissions from construction, grading, excavation, and demolition to the maximum extent feasible and consistent with state and federal regulations.
- Policy PHS-5.10: Particulate Emissions from County Roads.** The County shall require PM₁₀ and PM_{2.5} emission reductions on County-maintained roads to the maximum extent feasible and consistent with state and federal regulations.
- Policy PHS-5.11: Paving Materials.** 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 PHS-5.13: Industrial Best Management Practices.** The County shall require industrial facilities to incorporate economically feasible Best Management Practices and control technology to reduce PM₁₀ and PM_{2.5} emissions consistent with state and federal regulations.
- Policy PHS-5.14: Energy Consumption Reduction.** The County shall encourage new development to incorporate green building practices and reduce air quality impacts from energy consumption.

Regional and Local Air Quality Conditions

San Joaquin Valley Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area

is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, calls for the designation of areas as “attainment” or “nonattainment,” but based on the CAAQS rather than the NAAQS. Table 4.1-2 depicts the current attainment status of the Project site with respect to the NAAQS and CAAQS, as well as the attainment classifications for the criteria pollutants.

Table 4.1-2. San Joaquin Valley Air Basin Attainment Status

Pollutant	Designation/Classification	
	National Designation	California Designation
Ozone (O ₃) – 1-hour	No national standard ¹	Nonattainment/severe
Ozone (O ₃) – 8-hour	Nonattainment/extreme ²	Nonattainment
Nitrogen dioxide (NO ₂)	Unclassifiable/attainment	Attainment
Carbon monoxide (CO)	Unclassifiable/attainment	Attainment
Sulfur dioxide (SO ₂)	Unclassifiable/attainment	Attainment
Coarse particulate matter (PM ₁₀)	Attainment (Maintenance) ³	Nonattainment
Fine particulate matter (PM _{2.5})	Nonattainment ⁴	Nonattainment
Lead ⁵	Unclassifiable/attainment	Attainment
Sulfates (SO ₄)	No national standard	Attainment
Hydrogen sulfide (H ₂ S)	No national standard	Unclassified
Vinyl chloride ⁵	No national standard	No designation
Visibility-reducing particles	No national standard	Unclassified

Sources: SJVAPCD 2020c; EPA 2020 (national); CARB 2021 (California).

Notes: Attainment = meets the standards; Attainment (maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or unclassifiable = insufficient data to classify; Unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

¹ Effective June 15, 2005, the EPA revoked the national 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan (SJVAPCD 2004) on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

² Although San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved San Joaquin Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

³ On September 25, 2008, the EPA re-designated San Joaquin Valley to attainment for the PM₁₀ NAAQS and approved the PM₁₀ Maintenance Plan.

⁴ San Joaquin Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. The EPA designated San Joaquin Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).

⁵ CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined.

In summary, the EPA has designated the SJVAB as a nonattainment area for the national 8-hour O₃ standard, and CARB has designated the SJVAB as a nonattainment area for the California 1-hour and 8-hour O₃ standards. The SJVAB has been designated as a nonattainment area for the California 24-hour and annual PM₁₀ standards, a nonattainment area for the national 24-hour and annual PM_{2.5} standards, and as a nonattainment area for the California annual PM_{2.5} standard. The SJVAB is designated as unclassified or attainment for all other criteria air pollutants.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SJVAPCD and CARB monitor local ambient air quality at the Project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2016 to 2018 are presented in Table 4.1-3. The Tracy monitoring station, located at 5749 South Tracy Boulevard, Tracy, California 95377, is the nearest air quality monitoring station to the Project site, located approximately 3.3 miles southeast of the Project site. The data collected at this station are considered representative of the air quality experienced in the Project vicinity. Air quality data for O₃, NO₂, and PM₁₀ from the Tracy monitoring station are provided in Table 4.1-3. Because CO and PM_{2.5} are not monitored at the Tracy monitoring station, CO and PM_{2.5} measurements were taken from the Stockton monitoring station (1593 East Hazelton Avenue, Stockton, California 95205, approximately 19.8 miles northeast of the Project site). SO₂ is not currently monitored in the County and data is not available. The number of days exceeding the ambient air quality standards are also shown in Table 4.1-3.

Table 4.1-3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	2017	2018	2016	2017	2018
Ozone (O₃)										
Tracy	ppm	Maximum 1-hour concentration	California	0.09	0.109	0.093	0.099	4	0	1
	ppm	Maximum 8-hour concentration	California	0.070	0.092	0.082	0.081	19	5	8
			National	0.070	0.092	0.082	0.081	19	5	8
Nitrogen Dioxide (NO₂)										
Tracy	ppm	Maximum 1-hour concentration	California	0.18	0.028	0.040	0.048	0	0	0
			National	0.100	0.028	0.041	0.049	0	0	0
	ppm	Annual concentration	California	0.030	0.048	0.050	0.056	—	—	—
			National	0.053	0.048	0.050	0.056	—	—	—
Carbon Monoxide (CO)										
Stockton	ppm	Maximum 1-hour concentration	California	20	1.7	2.2	3	0	0	0
			National	35	1.7	2.2	3	0	0	0
	ppm	Maximum 8-hour concentration	California	9.0	1.3	1.9	2.7	0	0	0
			National	9	1.3	1.9	2.7	0	0	0
Coarse Particulate Matter (PM₁₀)^a										
Tracy	µg/m ³	Maximum 24-hour concentration	California	50	53.0	152.0	250.2	0.0 (0)	0.0 (0)	2.0 (2)
			National	150	52	151	249	0.0 (0)	0.0 (0)	2.0 (2)
	µg/m ³	Annual concentration	California	20	—	—	—	—	—	—

Table 4.1-3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	2017	2018	2016	2017	2018
<i>Fine Particulate Matter (PM_{2.5})^a</i>										
Stockton	µg/m ³	Maximum 24-hour concentration	National	35	28.5	47.9	257.5	–	–	–
	µg/m ³	Annual concentration	California	12	–	–	–	–	–	–
			National	12.0	11.7	12.2	17.6	–	–	–

Sources: CARB 2021; EPA 2020.

Notes: – = not available; µg/m³ = micrograms per cubic meter; ppm = parts per million

Data taken from CARB iADAM (<http://www.arb.ca.gov/adam>) and EPA AirData (<https://www.epa.gov/outdoor-air-quality-data>) represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for O₃ and particulate matter. Daily exceedances for particulate matter are estimated days because PM₁₀ and PM_{2.5} are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O₃, annual PM₁₀, or 24-hour SO₂, nor is there a California 24-hour standard for PM_{2.5}.

SO₂ is not currently monitored in the County and data is not available; therefore, it is not included in the table.

Tracy Monitoring Station is located at 5749 South Tracy Boulevard, Tracy, California 95377.

Stockton Monitoring Station is located 1593 East Hazelton Avenue, Stockton, California 95205.

^a Measurements of PM₁₀ and PM_{2.5} are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate a project's impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if a 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 non-attainment under an applicable federal or state ambient air quality standard.
- C. Expose sensitive receptors to substantial pollutant concentrations.
- D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- E. Result in cumulatively considerable air quality impacts.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether a project would have a significant impact on air quality.

SJVAPCD

Criteria Air Pollutants

The SJVAPCD Guidance has established emissions-based thresholds of significance for criteria pollutants (SJVAPCD 2015a), which are depicted in Table 4.1-4. As shown in Table 4.1-4, the SJVAPCD has established significance thresholds for construction emissions and operational permitted and non-permitted equipment and activities, and it recommends evaluating impact significance for these categories separately. These thresholds of significance are based on a calendar-year basis, although construction emissions are assessed on a rolling 12-month period.

Table 4.1-4. SJVAPCD CEQA Significance Thresholds for Criteria Pollutants

Pollutant	Construction Emissions (tons per year)	Operational Emissions (tons per year)	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
Reactive organic gas (ROG)	10	10	10
Oxides of nitrogen (NO _x)	10	10	10
Carbon monoxide (CO)	100	100	100
Sulfur oxides (SO _x)	27	27	27
Coarse particulate matter (PM ₁₀)	15	15	15
Fine particulate matter (PM _{2.5})	15	15	15

Source: SJVAPCD 2015a.

In addition to the annual emissions mass thresholds described in Table 4.1-4, the SJVAPCD also established screening criteria to determine whether a project would result in a CO hotspot at affected roadway intersections (SJVAPCD 2015a). If neither of the following criteria is met at any of the intersections affected by a project, that project would result in no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the project site will be reduced to LOS E or F.
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project site.

Ambient Air Quality Impacts

Appendix G of the CEQA Guidelines indicates that a project would have a significant air quality impact if it would violate any air quality standard or contribute substantially to an existing or projected air quality violation. The thresholds of significance for ambient air quality are based on the CAAQS and NAAQS, whereby a project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any CAAQS or NAAQS (SJVAPCD 2015a). The SJVAPCD recommends that an Ambient Air Quality Assessment be performed when on-site emissions of any criteria pollutant would equal or exceed any applicable threshold of significance for criteria pollutants or 100 pounds per day of any criteria pollutant (SJVAPCD 2015a). In the Ambient Air Quality Assessment, air pollutant concentrations are determined through air quality dispersion modeling, added to the corresponding background level, and compared to the relevant CAAQS and/or NAAQS. If the air pollutant concentrations plus background levels, however, would exceed a CAAQS or NAAQS, the SJVAPCD recommends that specified significant impact levels be applied to the modeled concentrations to assess whether a project's emissions would contribute substantially to an existing violation of the CAAQS or NAAQS (SJVAPCD 2014b).

Toxic Air Contaminants

The SJVAPCD has established thresholds of significance for combined TAC emissions from operations of permitted and non-permitted sources (SJVAPCD 2015a). Projects that have the potential to expose the public to TACs in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the maximally exposed individual equals or exceeds 20 in 1 million people.⁴
- Hazard Index⁵ for acute and chronic non-carcinogenic TACs equals or exceeds 1 for the maximally exposed individual.

Odors

As described in the SJVAPCD Guidance, due to the subjective nature of odor impacts, there are no quantitative thresholds to determine if potential odors would have a significant impact (SJVAPCD 2015a). Projects must be assessed for odor impacts on a case-by-case basis for the following two situations:

- Generators: Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate.
- Receivers: Residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The SJVAPCD has identified some common types of facilities that have been known to produce substantial odors, as well as screening distances between these odor sources and receptors. These are depicted in Table 4.1-5.

Table 4.1-5. Screening Levels for Potential Odor Sources

Type of Facility	Screening Distance (Miles)
Wastewater Treatment Facility	2
Sanitary Landfill	1
Transfer Station	1
Composting Facility	1
Petroleum Facility	2
Asphalt Batch Plant	1
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating (i.e., auto body shop)	1
Food Processing Facility	1
Feed Lot/Dairy	1
Rendering Plant	1

Source: SJVAPCD 2015d.

⁴ The cancer risk threshold was increased from 10 to 20 in 1 million with approval of APR 1906 (Framework for Performing Health Risk Assessments) on June 30, 2015.

⁵ Non-cancer adverse health impact, both for acute (short-term) and chronic (long-term) health effects, is measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentration from a project to a published reference exposure level that could cause adverse health effects as established by the Office of Environmental Health Hazard Assessment. The ratio (referred to as the hazard quotient) of each noncarcinogenic substance that affects a certain organ system is added together to produce an overall hazard index for that organ system.

If a project would result in an odor source with sensitive receptors located within these screening distances, additional analysis would be required. For projects involving new receptors locating near an existing odor source where there is currently no nearby development, and for new odor sources locating near existing receptors, the SJVAPCD recommends the analysis be based on a review of odor complaints for similar facilities, with consideration also given to local meteorological conditions, particularly the intensity and direction of prevailing winds. Regarding the complaint record of the odor source facility (or similar facility), the facility would be considered to result in significant odors if there has been (SJVAPCD 2015a):

- More than one confirmed complaint per year averaged over a 3-year period.
- Three unconfirmed complaints⁶ per year averaged over a 3-year period.

Cumulative

A project's emissions may be individually limited but cumulatively considerable when taken in combination with past, present, and future development within the SJVAB. If a project would result in a significant impact based on the SJVAPCD annual thresholds of significance for criteria pollutants, then the project would also be considered cumulatively significant. However, if a project's emissions are below the annual significance thresholds for criteria pollutants, the impact may still be cumulatively significant. For instance, if a project results in criteria pollutant concentrations that exceed any of the federal health-based ambient air concentration standards or causes a worsening of areas already exceeding those standards, the project's impacts would be considered individually significant and cumulatively significant. In addition, the combined emissions of a project and cumulative development located within the same area could potentially cause or worsen an exceedance of the concentration standards, whereby the project would have a cumulatively significant impact (SJVAPCD 2015a).

In regard to TACs, because impacts are localized and the SJVAPCD thresholds of significance for TACs have been established at an extremely conservative level, risks that equal or exceed the individual thresholds of significance are also considered cumulatively significant (SJVAPCD 2015a). No other cumulative risk thresholds would apply.

The SJVAPCD has not established cumulative significance thresholds regarding odor impacts.

Approach and Methodology

Project Design Features

The following project design features (PDFs) would be included as part of the Project:

PDF-AQ-1 Prior to the County of San Joaquin's (County) approval of any grading permits and during Project construction, a Fugitive Dust Control Plan shall be prepared demonstrating compliance with San Joaquin Valley Air Pollution Control District's (SJVAPCD) Rules 8021, 8031, 8041, 8051, 8061, and 8071, to the satisfaction of the County. The Project applicant or its designee shall require implementation of the following fugitive dust measures to minimize course particulate matter emissions as part of the Fugitive Dust Control Plan. All measures shall be designated on Grading Plans.

- a. Grading areas shall be watered, or another SJVAPCD-approved dust control non-toxic agent shall be used, at least three times daily to minimize fugitive dust only where chemical stabilizers are not used.
- b. All permanent roads and the paved access roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on

⁶ An unconfirmed complaint means that either the odor/air contaminant release could not be detected or the source/facility cannot be determined (SJVAPCD 2015a).

- unpaved roads. Foundations shall be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earth-moving operations.
- c. Grading areas shall be stabilized as quickly as possible to minimize fugitive dust.
 - d. Chemical stabilizer shall be applied, a gravel pad shall be installed, or the last 100 feet of internal travel path within the construction site shall be paved prior to public road entry.
 - e. Wheel washers, grates, rock, or road washers shall be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads.
 - f. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.
 - g. Perimeter erosion control shall be provided to prevent washout of silty material onto public roads. Unpaved construction site egress points shall be graveled to prevent track-out.
 - h. The construction access point shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred.
 - i. Haul trucks shall be covered or at least 2 feet of freeboard shall be maintained to reduce blow-off during hauling.
 - j. On-site stockpiles of excavated material shall be covered.
 - k. A 15 mile per hour speed limit on unpaved surfaces shall be enforced.
 - l. Construction traffic control plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections to the extent feasible. Construction traffic control plans shall be finalized and approved prior to issuance of grading permits.

PDF-AQ-2

The Project applicant or its designee shall provide to all Project construction employees the fact sheet entitled “Preventing Work-Related Coccidioidomycosis (Valley Fever)” by the California Department of Public Health and ensure all employees are aware of the potential risks the site poses. The Project applicant or its designee shall inform all Project construction employees of all occupational responsibilities and requirements contained in these measures to reduce potential exposure to *Coccidioides* spores.

The training shall include all the following topics:

- a. What Valley Fever is and how it is contracted.
- b. High-risk areas and types of work and environmental conditions during which the risk of contracting Valley Fever is highest.
- c. Personal risk factors that may create a higher risk for some individuals.
- d. Personal and environmental exposure prevention methods.
- e. Importance of early detection, diagnosis, and treatment.
- f. Recognizing common signs and symptoms of Valley Fever.
- g. Importance of reporting symptoms to the employer and seeking medical attention.
- h. Common treatment and prognosis for Valley Fever.

PDF-AQ/GHG-1 The buildings shall be designed to achieve a minimum the Leadership in Energy and Environmental Design (LEED) Certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources.

PDF-AQ/GHG-2 Install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.

PDF-AQ/GHG-3 Install conduit for future electric truck charging capabilities.

PDF-AQ/GHG-4 Install conduit for 33 future electric vehicle charging spaces.

PDF-AQ/GHG-5 Designate 21 parking spaces for clean air/electric vehicle/vanpool parking.

Construction

Emissions from the construction phase of the Project were estimated using California Emissions Estimator Model (CalEEMod) Version 2016.3.2. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project applicant and CalEEMod default values when Project specifics were not known. For purposes of estimating Project emissions, and based on information provided by the Project applicant, it is assumed that construction of the Project would commence in July 2021⁷ and would last approximately 10 months, ending in April 2022. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site Preparation: 2 weeks (July 1, 2021 – July 15, 2021)
- Grading: 1 month (July 16, 2021 – August 31, 2021)
- Building Construction: 7 months (September 1, 2021 – March 30, 2022)
- Paving: 1 month (April 1, 2022– April 30, 2022)
- Architectural Coating: 3 months (February 1, 2022 – April 30, 2022)

Grading would involve 37.47 acres and balanced cut and fill. The construction equipment mix and vehicle trips used for estimating the Project-generated construction emissions are shown in Table 4.1-6.

Table 4.1-6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Preparation	18	6	0	Tractors/Loaders/Backhoes	4	8
				Rubber Tired Loaders	3	8

⁷ The analysis assumes a construction start date of July 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 4.1-6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Grading	20	6	0	Excavators	2	8
				Graders	1	8
				Rubber Tired Loaders	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Building Construction	100	20	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Welders	1	8
Paving	16	4	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Architectural Coating	30	8	0	Air Compressors	1	6

Notes: See Appendix B for details.

The Project would implement dust control strategies as a PDF. To reflect implementation of proposed dust control strategies, the following was assumed in CalEEMod:

- Water exposed area three times per day (61% reduction in PM₁₀ and PM_{2.5}).
- Limit vehicle travel on unpaved roads to 15 miles per hour.

Operation

Emissions from the operational phase of the Project were estimated using CalEEMod Version 2016.3.2. Operational year 2022 was assumed consistent with completion of Project construction. Although emissions reductions were not quantified, the Project would incorporate the PDFs summarized above.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating were calculated in the building energy use module of CalEEMod, as described in the following text.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2017). Consumer

product ROG emissions were estimated in CalEEMod based on the floor area of nonresidential buildings and on the default factor of pounds of ROG per building square foot per day. For parking lot land uses, CalEEMod estimates ROG emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of ROG per square foot per day.

ROG off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers used during building maintenance. CalEEMod calculates the ROG evaporative emissions from application of nonresidential surface coatings based on the ROG emissions factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The ROG emissions factor is based on the ROG content of the surface coatings, and SJVAPCD's Rule 4601 (Architectural Coatings) governs the ROG (or VOC) content for interior and exterior coatings. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the nonresidential surface area for painting equals 2 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions from landscape equipment use are estimated based on CalEEMod default values for emissions factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For San Joaquin County, the average annual "summer" days are estimated to 365 days; however, it was assumed that landscaping equipment would likely only operate during the week (not weekends), so operational days were assumed to be 250 days per year in CalEEMod (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from nonresidential land uses was calculated in CalEEMod based on the Commercial and Residential Appliance Saturation Study (CAPCOA 2017).

Mobile Sources

Mobile sources for the Project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty trucks⁸) traveling to and from the Project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Emissions from the mobile sources during operation of the Project were estimated using a spreadsheet-based model and emissions factors from the CARB EMFAC2017 and EPA AP-42 factors for paved road dust generation. Vehicle trip lengths were assumed to be 40 miles for truck trips (in accordance with South Coast Air Quality Management District [SCAQMD] guidance) and 14.7 miles for passenger car trips (CalEEMod default) for the Project.

Based on the Traffic Impact Analysis prepared for the Project by Advanced Mobility Group (Appendix F) and Section 4.7, Transportation, of this Draft EIR, the Project would generate 1,182 daily trips. Based on 2016 ITE Warehouse Land Use, 801 trips would be passenger vehicles, light-duty trucks, and motorcycles (68%), and 381 trips would be

⁸ "Heavy-duty trucks" include medium-heavy-duty trucks (three-axle) and heavy-heavy-duty trucks (four-plus-axle).

heavy-duty trucks and medium-heavy-duty trucks (32%). The Project's mobile trips were conservatively estimated to operate 365 days per year (Appendix F).

Vehicle emissions occur during startup, operation (running), and idling, as well as from evaporative losses when the engines are resting. The emissions factors for trucks and passenger vehicles were determined using EMFAC2017, which generates emissions factors, expressed in grams per mile, grams per trip, and grams per vehicle per day, for the fleet in a class of motor vehicles within a region for a particular study year. For this analysis, the County was selected for the region and calendar year 2022 was selected in EMFAC to represent the Project's operational start year.

A composite, or weighted-average, emissions factor was developed for Project vehicle types if more than one vehicle category in EMFAC is anticipated to be representative of the Project vehicle. The composite emissions factors are weighted by vehicle miles traveled, population, or trips depending on the emissions process, which is the physical mechanism that results in the emissions of a pollutant. Delivery trucks were assumed to be heavy-duty trucks and medium-heavy-duty trucks. For the passenger vehicles, the composite emissions factor represents the weighted average emissions rate for passenger vehicles, light-duty trucks, and motorcycles. Heavy-duty trucks and medium-heavy-duty trucks were assumed to be diesel-fueled, and passenger vehicles, light-duty trucks, and motorcycles were assumed to be a composite mix of gasoline, diesel-fueled, natural gas, and electric, consistent with the default EMFAC vehicle mix.

Truck idling would be limited to 5 minutes in accordance with CARB's adopted Airborne Toxic Control Measures; however, for modeling purposes, it was conservatively assumed that heavy-duty trucks would idle for 15 minutes: entering the site, at the loading dock, and prior to exiting the site.

Off-Road Equipment

Based on the type of Project, off-road equipment is anticipated, which is typically associated with warehouse land uses; however, Project specifics are not available at this time. Nonetheless, in a good faith effort to include sources typically associated with warehouse land uses, forklifts, a yard truck, and diesel-fueled fire pump and diesel fuel storage tank are included in the Project's emissions inventory. Methods and assumptions to estimate these sources of emissions are discussed below. Note that all stationary sources would be required to comply with applicable SJVAPCD rules and regulations and would be required to obtain a permit to operate from the SJVAPCD.

Forklifts

The SCAQMD published a high cube warehouse truck trip study white paper summary of business survey results that summarizes various operational results from 34 operating high cube warehouses (SCAQMD Survey) (SCAQMD 2014). The SCAQMD Survey reported an average of 0.12 forklifts/pallet jacks per 1,000 square feet of building area, which was applied to the Project. Note that this estimate is for total forklifts and pallet jacks, and pallet jacks are small because they are primarily used to lift small loads in tight quarters (and are electric or manual); therefore, assuming all pieces of equipment are forklifts is conservative. For the Project, 87 forklifts were assumed based on the high cube warehouse factor of 0.12 forklifts/pallet jacks per 1,000 square feet of building area. All indoor forklifts are anticipated to be electric-powered, and although the majority of forklifts are anticipated to be used indoors, to conservatively capture the potential for outdoor forklift usage, 75% (65 forklifts) of the forklifts were assumed to be indoor and 25% (22 forklifts) were assumed to be outdoor. The indoor forklifts were modeled as 21-kilowatt electric forklifts that would operate at 8 hours per day, 365 days per year. The outdoor forklifts were modeled as 100-horsepower diesel rough-terrain forklifts that would operate at 8 hours per day, 365 days per year. CalEEMod and spreadsheets were used to estimate emissions from forklifts.

Yard Trucks

Industrial warehouse building operation may require cargo-handling equipment to move empty containers and empty chassis to and from the various pieces of equipment that receive and distribute containers, which is commonly done by yard trucks. Yard trucks, which are also called yard goats, utility tractors, hustlers, yard hostlers, and yard tractors, were reported at the majority of the 34 high cube warehouses in the SCAQMD Survey, with an average usage of 3.6 hostlers per million square feet of building area (SCAQMD 2014). The 3.6 hostlers per million square feet of building area was applied to the Project, with the Project totaling one-yard truck. The yard truck was assumed to be diesel-powered and 200 horsepower, and would operate 4 hours per day, 365 days per year. CalEEMod was used to estimate emissions from the yard truck.

Stationary Sources (Fire Pump and Fuel Storage)

The Project would operate one 351-horsepower Clarke John Deere JU6H-UFADD0 Tier 3 diesel-fueled fire pump and diesel fuel storage tank. The fuel storage tank would hold a maximum capacity of 133.40 gallons of diesel fuel. Although use of the fire pump during an emergency is not included in the emissions inventory because that would be speculative, emissions associated with testing and maintenance of the fire pump are included. The fire pump was assumed to be tested for 1 hour per day, 50 hours per year. CalEEMod was used to estimate emissions from the fire pump testing and maintenance. EPA TANKS 4.0.9d was used to estimate emissions from the diesel fuel storage tank.

Carbon Monoxide Hotspots

Mobile source impacts occur on two scales of motion: regionally and locally. Regionally, travel related to the Project would add to regional trip generation and increase vehicle miles traveled within the local airshed and the SJVAB. Locally, traffic generated by the Project would be added to the County's roadway system near the Project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-starting and operating at pollution-inefficient speeds, and is operating on roadways already congested with non-Project traffic, there would be the potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic.

In addition to the numerous factors that would need to be present for a CO hotspot to occur, the potential for CO hotspots in the SJVAB is steadily decreasing because of the continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, and the already very low ambient CO concentrations. Furthermore, CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors such as residents, children, hospital patients, and older adults. Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable LOS. Projects contributing to adverse traffic impacts may result in the formation of CO hotspots.

The 2015 SJVAPCD Guidance states that a quantitative CO hotspots analysis be performed if either of the following two conditions exist: a traffic study for a project indicates that the LOS on one or more streets or at one or more intersections in the project vicinity would worsen to LOS E or F, or a traffic study indicates that the project would substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity (SJVAPCD 2015a).

Operational Health Risk Assessment

CARB's Air Quality and Land Use Handbook encourages consideration of the health impacts of distribution centers that accommodates more than 100 trucks per day on sensitive receptors sited within 1,000 feet from the source in the land use decision-making process (CARB 2005). For the operational health risk, the operation year 2022 was assumed

consistent with completion of Project construction. Emissions from operation of the Project would include an on-site yard truck, an on-site diesel-fueled fire pump, an on-site diesel fuel storage tank, on-site and off-site truck trips, and on-site truck idling emissions. For risk assessment purposes, PM₁₀ in diesel exhaust is considered DPM, originating mainly from trucks traveling on site and off site, and truck idling located at loading docks on site. Truck travel and idling emission rates were obtained from CARB's EMFAC2017. Emission factors representing the vehicle mix and emissions for 2022 were used to estimate emissions associated with operation of the Project. Truck idling would be limited to 5 minutes in accordance with CARB's adopted Airborne Toxic Control Measure; however, truck idling was conservatively assumed to idle for 15 minutes.⁹ Therefore, the analysis conservatively overestimates DPM emissions from idling. Deliveries were assumed to occur throughout the week (i.e., Monday through Sunday). Similarly, emissions from the yard truck; diesel-fueled fire pump; and benzene, toluene, and xylene emissions from the diesel fuel storage tank were estimated and included in the HRA.

Conservatively, a 2022 EMFAC2017 run was conducted and a constant 2022 emissions factor data set was used for the entire duration of the analysis (i.e., 70 years). Use of the 2022 emissions factors would overstate potential impacts since this approach does not include reductions in emissions due to fleet turnover or cleaner technology with lower emissions. The truck travel DPM emissions were calculated by applying the exhaust PM₁₀ emissions factor from EMFAC2017 and the total truck trip number over the length of the distance traveled. In addition, the on-site truck idling exhaust emissions were calculated by applying the idle exhaust PM₁₀ emissions factor from EMFAC2017 and total truck trips over the total idling time (i.e., 15 minutes). The diesel-powered 200-horsepower yard truck DPM emissions were estimated using CalEEMod. The yard truck was assumed to operate 4 hours per day, 365 days per year (1,460 hours per year). The fire pump was assumed to be tested for 1 hour per day and 50 hours per year. CalEEMod was used to estimate emissions from the fire pump testing and maintenance. The diesel fuel storage tank VOC emissions were estimated using TANKS 2.0.9d, and TAC emissions were estimated using SJVAPCD's Storage Tank Diesel Fugitives emissions workbook (SJVAPCD 2016c).

Air dispersion modeling was performed using the EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 19191 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 9.9.0, as required by the SJVAPCD. Truck traffic was modeled as a line of adjacent volume sources from Interstate 580 and Interstate 205 to the Project site and truck travel on site to estimate emissions at proximate receptors. The yard truck was modeled as adjacent volume sources on site. Truck idling at the loading docks were modeled as a line of adjacent volume sources.

As previously described, health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SJVAPCD recommends a carcinogenic (cancer) risk threshold of 20 in 1 million. Some TACs increase noncancer health risk due to long-term (chronic) exposures. A hazard index less than 1 means that adverse health effects are not expected. Within this analysis, noncarcinogenic exposures of less than 1 are considered less than significant. The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. Acute relative exposure values are established and regulated for benzene, toluene, and xylene emissions from the diesel fuel storage tank and are included in the HRA.

The Project's potential cancer and noncancer health impacts were evaluated using exposure periods appropriate to evaluate long-term emissions increases (third trimester of pregnancy to 70 years). Emissions dispersion of TAC emissions were modeled using AERMOD, then cancer risk and noncancer health impacts subsequently using the CARB HARP2 (ADMRT, version 19121). The chemical exposure results were then compared to SJVAPCD thresholds to assess Project significance. Principal parameters of this modeling are presented in Table 4.1-7.

⁹ Although the Project is required to comply with CARB's idling limit of 5 minutes, on-site idling emissions was estimated for a total of 15 minutes of truck idling (three separate idling events), which would take into account on-site idling at the loading dock and idling during check-in and check-out.

Table 4.1-7. Operational Health Risk Assessment American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model Operational Principal Parameters

Parameter	Details
Meteorological Data	The latest 5-year meteorological data (2004–2008) for the City of Tracy station (Station ID 99008) provided by the SJVAPCD were downloaded (SJVAPCD 2018b) then input to AERMOD. For cancer or chronic noncancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Rural dispersion option was selected due to the undeveloped nature of the Project area.
Terrain Characteristics	Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate. The National Elevation Dataset (NED) dataset with resolution of 1/3 arc-second was used (SCAQMD 2018).
Emission Sources and Release Parameters	Air dispersion modeling of operational activities was conducted using mobile source diesel PM ₁₀ exhaust emissions generated using EMFAC2017. The yard truck and diesel-fueled fire pump diesel PM ₁₀ exhaust emissions were estimated using CalEEMod. The diesel fuel storage tank VOC emissions were estimated using TANKS 2.0.9d and toxic air contaminant emissions were estimated using SJVAPCD's Storage Tank Diesel Fugitives emission workbook (SJVAPCD 2016c).
Source Release Characterizations	<ul style="list-style-type: none"> • Off-site and on-site truck travel were modeled as a line of adjacent volume sources, and based on EPA methodology, the modeled sources would result in a release height of 3.4 meters, a plume height of 6.8 meters, and a plume width of 9.3 meters (EPA 2015; SBCAPCD 2020). • The truck idling emissions at loading docks were modeled as a line of volume sources with a release height of 4 meters, a plume height of 6.8 meters, and plume width of 3.3 meters (EPA 2015; SBCAPCD 2020; SCAQMD 2003). • The yard truck was modeled as a line of volume sources assuming a plume height of 6.8 meters, plume width of 3.3 meters, and release height of 3.4 meters (EPA 2015). • Based on dimension of a diesel-fueled CAT forklift, the forklift was modeled as a line of volume sources assuming a plume height of 4.85 meters, plume width of 2.25 meters, and release height of 2.42 meters (CAT Lift Trucks 2020). • Based on information from the applicant, the Project would install a Clarke John Deere JU6H-UFADD0 351-horsepower diesel-fueled fire pump. Thus, the modeling parameters (i.e., exhaust velocity, exhaust temperature) were obtained from the applicant and manufacturer specifications. The fire pump was modeled to have a release height of 1.91 meters, inside stack diameter of 0.15 meters, stack temperature of 816°F, and exhaust flowrate of 0.89 cubic meters per second. • Based on tank dimension information from the applicant and modeling guidance from the SJVAPCD, the diesel fuel storage tank working and breathing emissions were modeled as a point source with a release height of 2 meters, exhaust velocity of 0.001 meters per second, stack inside diameter of 0.001 meters, and tank exhaust temperature of 0°F (SJVAPCD 2006). • The Project buildings and the nearby warehouse were modeled to account for building downwash for point sources.

Notes: AERMOD = American Meteorological Society/Environmental Protection Agency Regulatory Model; SJVAPCD = San Joaquin Valley Air Pollution Control District; SCAQMD = South Coast Air Quality Management District; EPA = U.S. Environmental Protection Agency; PM₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns.

Source: Appendix B.

Regarding receptors, the operational scenario used a coarse Cartesian receptor grid with 100-meter spacing out to 1,000 meters and a fine Cartesian receptor grid with 50-meter spacing out to 500 meters from the Project site and either side of the line volume source.

4.1.4 Impacts Analysis

Threshold A: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Significant and Unavoidable Impact. A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. The SJVAPCD has prepared plans to attain federal and state O₃ and PM ambient air quality standards as required under the federal and California Clean Air Act, as detailed in Section 4.1.2. The SJVAPCD has established thresholds of significance for criteria pollutant emissions, which are based on SJVAPCD New Source Review offset requirements for stationary sources. Stationary sources in the SJVAPCD jurisdiction are subject to some of the toughest regulatory requirements in the nation. Emissions reductions achieved through implementation of the SJVAPCD offset requirements are a major component of SJVAPCD's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would not conflict or obstruct implementation of the SJVAPCD's air quality plan (SJVAPCD 2015a). As discussed for Threshold B, below, the Project would exceed the SJVAPCD threshold for NO_x during operations. Therefore, the Project would potentially conflict with or delay implementation of the SJVAPCD attainment plans and would result in a potentially significant impact. Implementation of Mitigation Measure (MM-)AQ-1 through MM-AQ-3 would reduce the Project's impacts; however, impacts would remain significant and unavoidable.

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

Significant and Unavoidable Impact. Past, present, and future development projects may contribute to adverse air quality impacts in the SJVAB on a cumulative basis. By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SJVAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the applied significance thresholds, it would have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Construction and operation of the Project would result in emissions of criteria air pollutants that may result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SJVAB is designated as nonattainment under the NAAQS or CAAQS. As discussed in Section 4.1.2, the SJVAB has been designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} under national and/or California standards. The following discussion quantitatively evaluates potential short-term construction and long-term operational impacts that would result from implementation of the Project.

Construction Emissions

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and ROG off-gassing) and off-site sources (i.e., vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emissions levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in Section 4.1.3, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2021 through 2022). Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the Project applicant and are intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed Project information was not available.

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The Project would implement various dust control strategies (PDF-AQ-1) and would be required to comply with SJVAPCD Regulation VIII to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads three times per day depending on weather conditions and restricting vehicle speed on unpaved roads to 15 miles per hour. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. The application of architectural coatings, such as exterior application/interior paint and other finishes, and of asphalt pavement would also produce ROG emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SJVAPCD's Rule 4601 (Architectural Coatings) and limit the amount of ROG emissions from cutback asphalt in compliance with the requirements of SJVAPCD's Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Pursuant to Regulation VIII, Rule 8021, Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant for Project construction.

Table 4.1-8 presents the estimated annual construction emissions generated during construction of the Project. Details of the emissions calculations are provided in Appendix B.

Table 4.1-8. Estimated Annual Construction Criteria Air Pollutant Emissions - Unmitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Tons per Year</i>					
2021	0.09	1.00	0.64	<0.01	0.14	0.09
2022	2.25	0.17	0.23	<0.01	0.02	0.01
Rolling 12-Month Total	2.34	1.17	0.87	<0.01	0.16	0.10
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix B for complete results.

These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SJVAPCD's Rule 4601 (Architectural Coatings) and implementation of the Project's fugitive dust control strategies, including watering of the Project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

Source: Appendix B.

As shown in Table 4.1-8, annual construction emissions would not exceed the SJVAPCD significance thresholds for ROG, NO_x, CO, sulfur oxides (SO_x), PM₁₀, or PM_{2.5} during construction in all construction years; thus, impacts would be less than significant.

Operational Emissions

The Project would involve construction of warehouse and office land uses and associated parking. Operation of the Project would generate ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from mobile sources, including vehicle trips from passenger vehicles and heavy-duty trucks; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; energy sources, including combustion of fuels used for space and water heating; off-road equipment, including forklifts and a yard truck; and stationary sources, specifically the fire pump testing and maintenance. As discussed in Section 4.1.3, pollutant emissions associated with long-term operations were quantified using CalEEMod for area, energy, off-road, and stationary sources, and were primarily based on CalEEMod default values. Project-generated mobile source emissions were estimated in a spreadsheet using EMFAC2017 emissions factors and based on Project-specific trip rates. Fuel storage tank emissions were estimated using EPA TANKS 4.0.9d.

Table 4.1-9 presents the annual area, energy, mobile, off-road, and stationary source emissions associated with operation (year 2022) of the Project. Details of the emissions calculations are provided in Appendix B.

Table 4.1-9. Estimated Annual Operational Criteria Air Pollutant Emissions - Unmitigated

Emission Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Tons per Year</i>					
Area	3.12	<0.01	0.01	0.00	<0.01	<0.01
Energy	0.02	0.22	0.19	<0.01	0.02	0.02
Mobile	0.73	20.32	7.88	0.09	11.95	3.10
Stationary	0.01	0.03	0.03	<0.01	<0.01	<0.01
Fuel Storage Tank	<0.01	0.00	0.00	0.00	0.00	0.00
Off-Road	0.48	6.17	9.39	0.01	0.22	0.20
Total	4.36	26.75	17.50	0.11	12.18	3.32
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	Yes	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix B for complete results.

Totals may not sum due to rounding.

Stationary sources consist of fuel pump testing and maintenance and diesel fuel storage tank.

Source: Appendix B.

As shown in Table 4.1-9, the combined annual area, energy, and mobile source emissions would not exceed the SJVAPCD's operational thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}. However, the Project would exceed the SJVAPCD's operational threshold for NO_x, and impacts would be potentially significant.

Ambient Air Quality Assessment

The SJVAPCD recommends that an Ambient Air Quality Assessment be performed when on-site emissions of any criteria pollutant would equal or exceed any applicable threshold of significance for criteria pollutants or 100 pounds per day of any criteria pollutant (SJVAPCD 2015a). The maximum daily emissions during construction for ROG would occur during the overlap of building construction and architectural coating in 2022. Operational emissions generated on site would include area sources, energy sources, and off-road equipment. The majority of the mobile emissions would occur a distance from the Project site; therefore, localized impacts from mobile sources were assumed to include traveling 0.45 miles on site and 0.25 miles off site. The results of the screening analysis are presented in Table 4.1-10.

Table 4.1-10. Estimated Maximum Daily Construction and Operational Criteria Air Pollutant Emissions - Unmitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Pounds per Day</i>					
Construction 2021	4.23	46.82	31.12	0.06	9.10	5.76
Construction 2022	72.15	18.94	19.43	0.03	0.98	0.87
Maximum Daily Construction Emissions	72.15	46.82	31.12	0.06	9.10	5.76
Maximum Daily Operational Emissions	21.43	51.85	68.03	0.12	2.76	1.63
<i>SJVAPCD Threshold</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District

See Appendix B for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 4601 (Architectural Coatings) and implementation of the Project’s fugitive dust control strategies, including watering of the Project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour. Construction mobile source emissions assumed to travel 0.45 miles on site and 0.25 miles off site. Operational mobile source emissions assumed to travel 0.45 miles on site and 0.25 miles off site.

Source: Appendix B.

As indicated in Table 4.1-10, the Project would not exceed 100 pounds per day on site for ROG, NO_x, CO, SO_x, PM₁₀, or PM_{2.5} during construction or operation; therefore, the Project’s localized criteria air pollutant impacts would be less than significant.

Health Effects

Operation of the Project would result in emissions that would exceed the SJVAPCD threshold for NO_x. Project construction and operation would not exceed SJVAPCD thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}, and construction would not exceed the SJVAPCD threshold for NO_x.

ROGs and NO_x are precursors to O₃, for which the SJVAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O₃ are generally associated with reduced lung function. The contribution of ROGs and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SJVAB due to O₃ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the ROG emissions would occur because exceedances of the O₃ CAAQS/NAAQS tend to occur April through October when solar radiation is highest. The holistic effect of a single project’s emissions of O₃ precursors is speculative due to the lack of quantitative methods to assess this impact. Because operation of the Project would exceed the SJVAPCD threshold for NO_x, implementation of the Project could contribute to regional O₃ concentrations and the associated health effects.

Operation of the Project would contribute to exceedances of the NAAQS and CAAQS for NO₂. Health effects that result from NO₂ and NO_x include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, Project construction would be relatively short term, and off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. In addition, existing NO₂ concentrations in the area are well

below the NAAQS and CAAQS standards. Due to exceedances in operation-generated emissions of NO_x, the Project could result in potential health effects associated with NO₂ and NO_x.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed previously and was determined to be a less-than-significant impact. Furthermore, the existing CO concentrations in the area are well below the NAAQS and CAAQS standards. Thus, the Project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the Project would also not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS and CAAQS for PM or obstruct the SJVAB from coming into attainment for these pollutants. The Project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Additionally, the Project would implement dust control strategies and be required to comply with SJVAPCD Regulation VIII, which would limit the amount of fugitive dust generated during construction. Pursuant to Regulation VIII, Rule 8021, Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts. Due to the minimal contribution of PM during construction and operation, the Project is not anticipated to result in health effects associated with PM₁₀ or PM_{2.5}.

In summary, because operation of the Project could result in exceedances of the SJVAPCD significance thresholds for NO_x during operation, the potential health effects associated with criteria air pollutants, specifically O₃, are potentially significant. Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects.

Implementation of mitigation measures MM-AQ-1 through MM-AQ-3, listed under Threshold A above, would result in mitigated operational emissions. Due to the lack of Project-specific information, the effectiveness from MM-AQ-1 and MM-AQ-2 could not be quantified. The mitigated operational emissions are summarized in Table 4.1-11. Details of the emission calculations are provided in Appendix B.

Table 4.1-11. Estimated Annual Operational Criteria Air Pollutant Emissions – Mitigated

Emission Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Tons per Year</i>					
Area	3.12	<0.01	0.01	0.00	<0.01	<0.01
Energy	0.02	0.22	0.19	<0.01	0.02	0.02
Mobile	0.73	20.32	7.88	0.09	11.95	3.10
Stationary	0.01	0.03	0.03	<0.01	<0.01	<0.01
Fuel Storage Tank	<0.01	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.16	0.32	<0.01	<0.01	<0.01
Total	3.89	20.73	8.43	0.09	11.97	3.12
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	Yes	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; PDF = project design feature; <0.01 = reported value less than 0.01.

These emissions reflect CalEEMod "mitigated" output, which accounts for implementation of MM-AQ-3, implementation of Tier 4 interim yard truck and electric forklifts.

See Appendix B for complete results.
Totals may not sum due to rounding.
Source: Appendix B.

As shown in Table 4.1-11, operation-generated NO_x emissions would exceed the SJVAPCD threshold of significance. Thus, operation-generated impacts after mitigation would be **significant and unavoidable** even with implementation of mitigation measures MM-AQ-1 through MM-AQ-3.

Threshold C: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact.

Health Impacts of Carbon Monoxide

As described previously, exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. Mobile-source impacts, including those related to CO, occur essentially on two scales of motion. Regionally, Project-related operational travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SJVAB. Locally, Project operational traffic would be added to the roadway system in the vicinity of the Project site. Although the SJVAB is currently an attainment area for CO, there is a potential for the formation of microscale CO hotspots to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-Project traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SJVAB is steadily decreasing.

The 2015 SJVAPCD Guidance states that a quantitative CO hotspots analysis should be performed if either of the following two conditions exist: a traffic study for the project indicates that the LOS on one or more streets or at one or more intersections in the project vicinity would worsen to LOS E or F, or a traffic study indicates that the project would substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity (SJVAPCD 2015a).

The Traffic Impact Analysis prepared for the Project (Appendix F) evaluated whether there would be a worsening in the LOS (e.g., congestion) at the intersections affected by the Project. The Project's traffic analysis evaluated six intersections based on existing traffic volumes and current street geometry. The results of the LOS assessment show that under Cumulative Plus Project conditions, four of the six study intersections are forecast to operate at unacceptable LOS (LOS E or worse) during the peak hours, with a volume over 3,000 trips. The four key study intersections according to the criteria above are Hansen Road and Schulte Road (LOS F in PM peak hour), Valpico Road and Lammers Road (LOS F/F in AM/PM peak hour), Valpico Road and Corral Hollow Road (LOS F in PM peak hour), and Lammers Road and 11th Street (LOS F/F in AM/PM peak hours). The remaining key intersections are projected to operate at acceptable LOS conditions in the Cumulative Plus Project scenario.

The screening evaluation presents LOS and whether a quantitative CO hotspots analysis may be required. According to the California Department of Transportation (Caltrans) CO Protocol, there is a cap on the number of intersections that need to be analyzed for any one project. For a single project with multiple intersections, only the three intersections representing the worst LOS ratings of the project, and, to the extent they are different intersections, the three intersections representing the highest traffic volumes, need be analyzed. For each intersection failing a screening test as described in this protocol, an additional intersection should be analyzed (Caltrans 2010).

Based on the CO hotspot screening evaluation (Appendix B), intersections at Hansen Road and Schulte Road, Valpico Road and Corral Hallow Road, and Lammers Road and 11th Street all have signalized control. The potential impact of the Project on local CO levels was assessed at these three intersections with the Caltrans CL4 interface based on the California LINE Source Dispersion Model, which allows microscale CO concentrations to be estimated along each roadway corridor or near intersections (Caltrans 1998a).

The emissions factor represents the weighted average emissions rate of the local County vehicle fleet expressed in grams per mile per vehicle. Consistent with the traffic scenario, emissions factors for 2022 were used. Emissions factors were predicted by EMFAC2017 based on a 5-mile-per-hour average speed for all of the intersections for approach and departure segments. The hourly traffic volume anticipated to travel on each link, in units of vehicles per hour, was based on information provided by the Traffic Impact Analysis and modeling assumptions are outlined in Appendix B.

Four receptor locations were modeled at each intersection to determine CO ambient concentrations. A receptor was assumed on the sidewalk at each corner of the modeled intersections to represent the future possibility of extended outdoor exposure. CO concentrations were modeled at these locations to assess the maximum potential CO exposure that could occur in 2022. A receptor height of 5.9 feet (1.8 meters) was used in accordance with Caltrans recommendations for all receptor locations (Caltrans 1998b).

The CO Protocol recommends using the highest 1-hour measurement in the last 3 years as the projected future 1-hour CO background concentration for the analysis (Caltrans 2010). A CO concentration of 3 ppm by volume was recorded in 2018 for the Stockton monitoring station in San Joaquin County and was assumed in the California LINE Source Dispersion Model for 2022 (EPA 2020). To estimate an 8-hour average CO concentration, a persistence factor of 0.69, as calculated based on the CO Protocol (Caltrans 2010), was applied to the output values of predicted concentrations in ppm at each of the receptor locations. Model input and output data are available in Appendix B. Table 4.1-12 summarizes the maximum 1-hour and 8-hour CO concentrations at the studied intersections.

Table 4.1-12. CALINE4 Predicted Carbon Monoxide Concentrations

Intersection	Maximum Modeled Impact for Year 2022 Cumulative Plus Project (ppm)	
	1-Hour	8-Hour ^a
Hansen Road and Schulte Road	3.3	2.78
Valpico Road and Corral Hallow Road	3.4	2.87
Lammers Road and 11th Street	3.7	3.12

Source: Caltrans 1998a (CALINE4).

Notes:

ppm = parts per million

^a 8-hour concentrations were obtained by multiplying the 1-hour concentration by a persistence factor of 0.69 (Caltrans 2010).

As shown in Table 4.1-12, the maximum CO concentration predicted for the 1-hour averaging period at the studied intersections would be 3.7 ppm, which is below the 1-hour CO CAAQS of 20 ppm (CARB 2016c). The maximum predicted 8-hour CO concentration of 3.12 ppm at the studied intersections would be below the 8-hour CO CAAQS of 9.0 ppm (CARB 2018). Neither the 1-hour nor 8-hour CAAQS would be equaled or exceeded at any of the intersections studied. Accordingly, the Project would not cause or contribute to violations of the CAAQS and would not result in exposure of sensitive receptors to localized high concentrations of CO. CO tends to be a localized impact associated with congested intersections. Thus, the Project's CO emissions would not contribute

to significant health effects associated with this pollutant. As such, impacts to sensitive receptors with regard to potential CO hotspots resulting from the Project's contribution to cumulative traffic-related air quality impacts would be less than significant.

Health Impacts of Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute (immediate) and/or chronic (cumulative) non-cancer health effects. Potential construction-related health risk is qualitatively evaluated, and operational health risk is quantitatively evaluated for the Project, below.

Construction Health Risk

Project construction would result in emissions of DPM from heavy construction equipment and trucks accessing the site. DPM is characterized as a TAC by California. The Office of Environmental Health Hazard Assessment has identified carcinogenic and chronic noncarcinogenic effects from long-term exposure but has not identified health effects due to short-term exposure to diesel exhaust. According to the Office of Environmental Health Hazard Assessment, HRAs, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with a project (OEHHA 2015). Thus, the duration of the proposed construction activities would only constitute a small percentage of the total 70-year exposure period. Due to this relatively short period of exposure (10 months) and minimal DPM emissions on site, TACs generated by the Project would not result in concentrations causing significant health risks. In addition, diesel equipment would also be subject to CARB's Airborne Toxic Control Measures for in-use off-road diesel fleets, which would minimize DPM emissions. Furthermore, the nearest sensitive receptor is located more than 1,500 feet from the Project site. Overall, based on the above considerations, the Project would not result in substantial TAC exposure to sensitive receptors in the vicinity of the Project, and impacts would be less than significant.

Operational Health Risk

An HRA was performed to estimate the Maximum Individual Cancer Risk, Chronic Hazard Index, and Acute Hazard Index for residential receptors as a result of emissions from the Project's diesel yard truck and diesel forklifts; diesel-fueled fire pump; benzene, toluene, and xylene emissions from the diesel fuel storage tank; truck trips; and truck idling emissions. Results of the HRA during operation are presented in Table 4.1-13.

Table 4.1-13. Operational Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Impact Level	CEQA Threshold
Maximum Individual Cancer Risk	Per Million	37.75	20
Chronic Hazard Index	Index Value	0.009	1.0
Acute Hazard Index	Index Value	0.0004	1.0

Source: SJVAPCD 2015a.

Notes: CEQA = California Environmental Quality Act.

The results of the operational analysis demonstrate that the Project would be below the chronic and acute hazard index threshold of 1.0. However, the Project would exceed the maximum individual cancer risk of 20 in 1 million for the residential receptor. Thus, the impact would be potentially significant.

Valley Fever

As discussed in Section 4.1.1, the average incidence rate of Valley Fever within the County is below the statewide average. Furthermore, construction of the Project would comply with SJVAPCD Regulation VIII (Fugitive PM₁₀ Prohibition), which requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible PM from crossing any property line. SJVAPCD Regulation VIII is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. In addition, the Project would implement various dust control strategies and provide Valley Fever awareness and training to all Project construction employees as required by PDF-AQ-1 and PDF-AQ-2. The nearest sensitive-receptor land use (existing residence) is located more than 1,500 feet from the Project site. Because the Project would implement dust control strategies and Valley Fever awareness and training, and due to the distance from the nearest sensitive receptors, it is not anticipated that earth-moving activities during Project construction would result in exposure of nearby sensitive receptors to Valley Fever. Pursuant to Regulation VIII, Rule 8021, Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan that would control the release of the *Coccidioides immitis* fungus during construction activities. Therefore, the Project would have a less-than-significant impact with respect to Valley Fever exposure for sensitive receptors.

Threshold D: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. The analysis of the Project's potential to result in other emissions is focused on potential odor impacts. The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicle and equipment exhaust emissions during construction of the Project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Furthermore, SJVAPCD Rule 4641 limits the amount of VOC emissions from cutback asphalt. Thus, any potential odors generated during asphalt paving would be regulated through mandatory compliance with SJVAPCD rules. Therefore, impacts associated with odors during construction would be less than significant.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not include land uses that generate odors during operation. Therefore, Project operations would result in odor impacts that are less than significant.

Threshold E: Would the Project result in cumulatively considerable air quality impacts?

Less-Than-Significant Impact. A project's emissions may be individually limited but cumulatively considerable when taken in combination with past, present, and future development within the SJVAB. If a project would result in a significant impact based on the SJVAPCD annual thresholds of significance for criteria pollutants, then the project would also be considered cumulatively significant. However, even if project emissions are below the annual significance thresholds for criteria pollutants, the impact may still be cumulatively significant. For instance, if a project results in criteria pollutant concentrations that exceed any of the federal health-based ambient air concentration standards or causes a worsening of areas already exceeding those standards, the project's impacts would be considered individually significant and cumulatively significant. In addition, the combined emissions of a project and cumulative development located within the same area could potentially cause or worsen an exceedance of the concentration standards, whereby the project would have a cumulatively significant impact (SJVAPCD 2015a). In regard to TACs, because impacts are localized and the SJVAPCD thresholds of significance for TACs have been established at an extremely conservative level, risks that equal or exceed the individual thresholds of significance are also considered cumulatively significant (SJVAPCD 2015a). No other cumulative risk thresholds would apply. The SJVAPCD has not established cumulative significance thresholds regarding odor impacts.

As set forth herein, Project construction would not generate emissions that would exceed the SJVAPCD annual thresholds; therefore, the Project's cumulative impacts from construction would be less than significant. Because the Project would exceed the Project-level thresholds for regional NO_x emissions during operation, the Project's cumulative impacts with respect to such emissions would be considerable and significant. Project operation would not exceed the cancer risk, chronic hazard index, or acute hazard index thresholds with implementation of mitigation; therefore, the Project's cumulative impacts with respect to impacts of TACs would be less than significant. Furthermore, the Project's construction odor impacts would be short term and would disperse rapidly, and Project operation would not include land uses that generate odors. Therefore, Project construction and operations would result in a cumulative odor impact that is less than significant.

4.1.5 Mitigation Measures

MM-AQ-1 Vehicle Miles Traveled Reduction Strategies. The Project shall implement a Transportation Demand Management (TDM) Program to facilitate increased opportunities for bicycling and pedestrian travel, as well as provide the resources, means, and incentives for ride-sharing and carpooling to reduce vehicle miles traveled and associated criteria air pollutant emissions. The following components shall be included in the TDM Program:

Bicycle and Pedestrian Travel

- Provide bicycle parking facilities of one bike rack space per 20 vehicle/employee parking spaces or to meet demand, whichever results in the greater number of bicycle racks.
- Provide shower and locker facilities to encourage employees to bike and/or walk to work of one shower and three lockers per every 25 employees.

Ride-Sharing and Commute Reduction

- Promote ride-sharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate

passenger loading and unloading and waiting areas for ride-sharing vehicles, and/or providing a website or message board for coordinating rides.

- Implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute-trip-reduction strategies. Implementing commute-trip-reduction strategies without a complementary marketing strategy would result in lower vehicle miles traveled reductions. Marketing strategies may include new employee orientation of trip reduction and alternative mode options, event promotions, and/or publications.

MM-AQ-2 **Idling Restriction.** The Project shall minimize idling time of all vehicles and equipment to the extent feasible; idling for periods of greater than 5 minutes shall be prohibited. Signage shall be posted at truck parking spots, entrances, and truck bays advising that idling time shall not exceed 5 minutes per idling location. To the extent feasible, the tenant shall restrict idling emissions from trucks by using auxiliary power units and electrification.

MM-AQ-3 **Forklifts and Yard Trucks.** During operation, the Project shall require that all forklifts be powered by electricity or other zero-emission technology; if electric is not available or feasible, propane is acceptable. All yard trucks shall meet Tier 4 Interim standards or better, or use zero-emissions technology (e.g., electric, fuel-cell).

4.1.6 Level of Significance After Mitigation

Threshold A: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Project would result in potentially significant impacts with regard to conflicting with or obstructing implementation of an applicable air quality plan. Implementation of Mitigation Measure (MM-)AQ-1 through MM-AQ-3 would reduce the Project's impacts; however, impacts would remain significant and unavoidable.

Threshold B: 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?

Implementation of MM-AQ-1 through MM-AQ-3, listed under Threshold A above, would result in mitigated operational emissions. Due to the lack of Project-specific information, the effectiveness from MM-AQ-1 and MM-AQ-2 could not be quantified. The mitigated operational emissions are summarized in Table 4.1-14. Details of the emission calculations are provided in Appendix B.

Table 4.1-14. Estimated Annual Operational Criteria Air Pollutant Emissions – Mitigated

Emission Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons per Year					
Area	3.12	<0.01	0.01	0.00	<0.01	<0.01
Energy	0.02	0.22	0.19	<0.01	0.02	0.02
Mobile	0.73	20.32	7.88	0.09	11.95	3.10
Stationary	0.01	0.03	0.03	<0.01	<0.01	<0.01
Fuel Storage Tank	<0.01	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.16	0.32	<0.01	<0.01	<0.01

Table 4.1-14. Estimated Annual Operational Criteria Air Pollutant Emissions – Mitigated

Emission Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons per Year					
Total	3.89	20.73	8.43	0.09	11.97	3.12
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	Yes	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; PDF = project design feature; <0.01 = reported value less than 0.01.

These emissions reflect CalEEMod “mitigated” output, which accounts for implementation of MM-AQ-3, implementation of Tier 4 interim yard truck and electric forklifts.

See Appendix B for complete results.

Totals may not sum due to rounding.

Source: Appendix B.

As shown in Table 4.1-14, operation-generated NO_x emissions would exceed the SJVAPCD threshold of significance. Thus, operation-generated impacts after mitigation would be **significant and unavoidable** with implementation of MM-AQ-1 through MM-AQ-3.

Threshold C: Would the Project expose sensitive receptors to substantial pollutant concentrations?

An HRA was performed to estimate the Maximum Individual Cancer Risk, Chronic Hazard Index, and Acute Hazard Index for residential receptors as a result of emissions from the Project during operation on sensitive receptors proximate of the Project. Results of the operational HRA, including MM-AQ-3, are presented in Table 4.1-15.

Table 4.1-15. Operational Health Risk Assessment Results – Mitigated

Impact Parameter	Units	Impact Level	CEQA Threshold
Maximum Individual Cancer Risk	Per Million	4.10	20
Chronic Hazard Index	Index Value	0.0010	1.0
Acute Hazard Index	Index Value	0.0004	1.0

Source: SJVAPCD 2015a.

Notes: CEQA = California Environmental Quality Act.

These emissions reflect CalEEMod “mitigated” output, which accounts for implementation of MM-AQ-3, implementation of Tier 4 interim yard truck and electric forklifts.

As shown in Table 4.1-15, the TAC emissions from operation of the Project would result in Maximum Individual Cancer Risk, Chronic Hazard Index, and Acute Hazard Index less than the applicable SJVAPCD significance thresholds, resulting in a **less-than-significant** impact with mitigation.

Threshold D: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The Project would result in **less-than-significant impacts** with regard to other emissions (such as those leading to odors). No mitigation is required.

Threshold E: Would the Project result in cumulatively considerable air quality impacts?

Because operation-generated NO_x emission impacts would be significant and unavoidable with implementation of MM-AQ-1 through MM-AQ-3, the Project's cumulative impacts with respect to such emissions would remain **significant and unavoidable**.

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4.2 Biological Resources

This section describes the existing biological resources conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the Biological Resources Constraints Assessment for the Project prepared by Dudek in November 2020 (Appendix C). The document prepared for the Project site by the San Joaquin Council of Governments, LBA Logistics Center III Project (PA-1900208) SJMSCP Incidental Take Minimization Measures (APN: 209-240-23), was also referenced (SJCOG 2020).

4.2.1 Existing Conditions

This section describes the existing conditions on the Project site and identifies resources that could be affected by implementation of the Project.

The information in this section is based on a review of pertinent literature (including the Biological Resources Constraints Assessment [Appendix C]) and the field survey of the Project site that was conducted on October 8, 2020. The literature review included querying the following sources for special-status species and/or sensitive vegetation communities in the region: California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2020a), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online tool (USFWS 2020a), and California Native Plant Society's Online Inventory of Rare and Endangered Vascular Plants (CNPS 2020). The National Wetlands Inventory online map was reviewed to identify potential aquatic resources (USFWS 2020b). The Web Soil Survey of the Natural Resources Conservation Service (USDA 2020a) was also reviewed to identify potentially occurring special-status plants based on known soil associations.

Vegetation Communities and Land Cover Types

One terrestrial land cover type was identified on the Project site during the field survey on October 8, 2020: disturbed/developed land. The Project site is also mapped as "Agricultural Habitat" by the San Joaquin Council of Governments (SJCOG 2020). There are no natural vegetation communities, including those considered sensitive by CDFW, within or adjacent to the Project site.

Disturbed/developed is a land cover type that represents the entire 37.7-acre Project site and includes dirt or gravel access roads, staging or laydown areas, and dry basins and other areas that no longer support natural vegetation. Much of this cover type is either barren of vegetation or dominated by non-native plant species indicative of disturbed sites, such as Russian thistle (*Salsola tragus*), shortpod mustard (*Hirschfeldia incana*), five horn bassia (*Bassia hyssopifolia*), and invasive annual grasses.

Jurisdictional Aquatic Resources and Hydrologic Setting

There are no jurisdictional aquatic resources within the Project site. A formal jurisdictional delineation of the Project site was not conducted during the field survey. However, no potentially jurisdictional aquatic resources were identified during the field survey, and the National Wetlands Inventory does not identify any previously mapped wetlands or other waters within the Project site (USFWS 2020b).

Artificially constructed basins present on the site are remnants of biomass plant processes and are not jurisdictional aquatic resources. Areas on the site that were intended to hold water, such as the remnant retention basin near the northeast corner of the site, no longer have a water source because of the termination of biomass plant activities on the site and demolition of the biomass plant (NETROnline 2020). These basin features are no longer supplied by process water or other biomass plant discharge, and thus evaporate. Rainfall may supply water to these areas for short periods of time, but a regular amount of rainfall would not support significant ponding to qualify these remnant basins as wetlands or other jurisdictional waters. Basins on site are dominated by upland plant species.

The Project site is located in the Old River watershed (Hydrologic Unit Code 1804000306) within the larger San Joaquin Delta (CDFW 2020a). There are three retention basins mapped as freshwater ponds within the property south of the Project site. The closest of these basins is approximately 0.03 miles south of the Project site, and these are the nearest mapped waters to the Project site (USFWS 2020b). The Delta Mendota Canal passes within 0.5 miles south of the site, and an unnamed channel mapped as riverine habitat flows approximately 0.25 miles northeast of the site (USFWS 2020b).

Soils

According to the Natural Resources Conservation Service (USDA 2020a), one soil type is mapped on the Project site: Capay clay, 0% to 1% slopes, MLRA 17. The Capay series is typically found on basin or valley floors and consist of very deep, moderately well or sometimes poorly drained soils formed from clay alluvium that is derived from sedimentary rock such as sandstone or shale. The soil type mapped on the Project site is considered a hydric soil, which is commonly associated with wetlands (USDA 2020b). However, no aquatic resources or areas dominated by hydrophytic vegetation¹ were identified on the Project site during the site visit. The extensive historic site disturbance, including grading and soil compaction, have likely altered the hydric characteristics of this soil type.

Wildlife Resources

Seven common wildlife species were observed on the Project site during the field survey conducted by a Dudek biologist in October 2020. These observations include six bird species (American crow [*Corvus brachyrhynchos*], black phoebe [*Sayornis nigricans*], house sparrow [*Passer domesticus*; non-native], killdeer [*Charadrius vociferus*], mourning dove [*Zenaida macroura*], and western meadowlark [*Sturnella neglecta*]) and one mammal species (black-tailed jackrabbit [*Lepus californicus*]).

Shrubs, bare ground, abandoned equipment, and built structures in or adjacent to the Project site and surrounding areas provide suitable nesting habitat for several local and migratory bird species. Native birds of prey are protected by California Fish and Game Code (CFGC) Section 3503.5, and migratory bird species are protected by the federal Migratory Bird Treaty Act. The disturbed nature of the site and lack of trees and native vegetation limit suitability for nesting to primarily common bird species, including killdeer, mourning dove, and other bird species with the potential to nest on disturbed sites. Burrowing owl (*Athene cunicularia*) is a special-status species with low potential to occur on the Project site and is discussed further below.

The Project site lacks aquatic resources that would be suitable for special-status fish or aquatic invertebrate species; therefore, no such species are expected to occur.

¹ Vegetation typically adapted for life in saturated soil conditions.

Special-Status Wildlife Species

For the purposes of this analysis, special-status wildlife species are those that are designated as either rare, threatened, or endangered (or candidates for designation) by CDFW or USFWS; are protected under either the California Endangered Species Act (CESA) or federal Endangered Species Act (FESA); meet the California Environmental Quality Act (CEQA) definition for endangered, rare, or threatened (14 CCR 15380[b],[d]); are considered fully protected under CFGC Sections 3511, 4700, 5050, and 5515; or are on the CDFW Special Animals List (CDFW 2020b) and determined by CDFW to be a Species of Special Concern.

Results of the CNDDDB and USFWS searches revealed 42 special-status wildlife species as having a potential to occur in the Project region. Of these special-status wildlife, 41 species were removed from consideration due to lack of suitable habitat within or adjacent to the Project site, the level of disturbance from frequent human activity surrounding the Project site, or due to the Project site being outside of the species' known range (see Appendix C). Burrowing owls have a potential to occur in or adjacent to the Project site and are discussed further below. No special-status wildlife species, apart from native and migratory birds, were detected during the October 2020 field survey.

Burrowing Owl

Burrowing owl is a CDFW Species of Special Concern with a low potential to occur on the Project site. In California, burrowing owls are yearlong residents of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats (CDFW 2020c). Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993). Burrowing owls may occur in human-altered landscapes, such as agricultural areas, ruderal grassy fields, vacant lots, and pastures, if the vegetation structure is suitable (i.e., open and sparse); useable burrows are available; and foraging habitat occurs in close proximity (Gervais et al. 2008).

The presence of burrows is the most essential component of burrowing owl habitat, and burrows are used for nesting, roosting, cover, and caching prey. Because burrowing owls do not typically dig their own burrows, they primarily select their habitat based on the presence of burrowing animals, such as prairie dogs, ground squirrels, badgers, marmots, coyotes, and tortoises (Haug et al. 1993). In California, burrowing owls most commonly live in burrows created by California ground squirrels (*Spermophilus beecheyi*).

Burrowing owl has a low potential to occur on the Project site. Although the disturbed open habitat with sparse, low vegetation on the Project site would be potentially suitable for burrowing owls, no suitable burrows were identified on site. Small mammal burrows identified on site during the field survey appeared inactive (i.e., had cobwebs covering the burrow opening or were collapsed). Additionally, there was a lack of small mammal activity on the Project site.

The nearest documented occurrence of burrowing owl is located approximately 0.3 miles southwest of the Project site in grassland habitat. In 1992 burrowing owls were excluded from that site and are considered extirpated (CDFW 2020a). The next nearest documented occurrence is from 2005 and consisted of multiple owls observed approximately 1 mile east of the Project site (CDFW 2020a).

Special-Status Plant Species

For the purposes of this analysis, special-status plant species are those plants listed, proposed for listing, or candidates for listing as threatened or endangered by USFWS under FESA (16 USC 1531 et seq.); those listed or proposed for listing as rare, threatened, or endangered by CDFW under CESA (CFGF Section 2050 et seq.); and plants that have a California Rare Plant Rank of 1 or 2 in the California Native Plant Society’s online Inventory of Rare and Endangered Plants (CNPS 2020).

No plant species with federal or state listing status pursuant to FESA or CESA, or with a California Rare Plant Rank of 1 or 2 have a potential to occur on or adjacent to the Project site. The Project site is not likely to support any special-status plants due to the lack of suitable habitat within or adjacent to the Project site, the extensively disturbed condition of the site and lack of natural vegetation communities, and due to the site being outside of the species’ known elevation range. No special-status plants were detected on site or in the surrounding area during the October 2020 field survey conducted by Dudek biologists. Although no focused surveys were conducted, focused surveys for special-status plant species are not warranted due to the highly disturbed condition of the site. Non-native plant species indicative of disturbance dominate the site, such as Russian thistle, shortpod mustard, five horn bassia, and invasive annual grasses.

Results of the CNDDDB and California Native Plant Society Online Inventory searches revealed that 37 special-status plant species have potential to occur in the Project region, which includes the “Tracy and Midway, California” U.S. Geological Survey 7.5-minute quadrangle and the eight surrounding quadrangles. Of these special-status plants, all 37 species were removed from consideration and are not expected to occur on the site due to the factors described above.

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS). This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. As part of this regulatory act, FESA provides for designation of critical habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features “essential to the conservation of the species” are found and that “may require special management considerations or protection.” Critical habitat may also include areas outside the current geographical area occupied by the species that are nonetheless “essential for the conservation of the species.” Under provisions of FESA Section 9(a)(1)(B), it is unlawful to “take” any listed species. “Take” is defined in FESA Section 3(19) as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct.

FESA Section 7(a)(2) directs federal agencies to consult with USFWS for any actions they authorize, fund, or carry out that may jeopardize the continued existence of any listed species or result in the destruction or adverse modification of federally designated critical habitat. Consultation begins when the federal agency submits a written request for initiation to USFWS or NMFS, along with the agency’s biological assessment of its proposed action (if necessary), and USFWS or NMFS accepts that sufficient information has been provided to initiate consultation. If

USFWS or NMFS concludes that the action is not likely to adversely affect a listed species, the action may be conducted without further review under FESA. Otherwise, USFWS or NMFS must prepare a written Biological Opinion describing how the agency's action will affect the listed species and its critical habitat.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the Migratory Bird Treaty Act, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the Migratory Bird Treaty Act's “take” prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs; unintentional or accidental take is not prohibited (M-37050). However, in August 2020, a federal court upheld the long-standing interpretation of the Migratory Bird Treaty Act, such that it covers intentional and unintentional take. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect migratory bird species.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into “waters of the United States.” The term “wetlands” (a subset of waters) is defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR 328.3[b]). In the absence of wetlands, the limits of U.S. Army Corps of Engineers jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark” (33 CFR 328.3[e]).

State

California Endangered Species Act

CDFW administers CESA (CFGF Section 2050 et seq.), which prohibits the take of plant and animal species designated by the California Fish and Game Commission as endangered, candidate, or threatened in California. Under CESA Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA addresses the take of threatened, endangered, or candidate species by stating the following (CFGF Sections 2080–2085):

No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (California Fish and Game Code Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code Section 80001).

CFGC Sections 2081(b) and (c) authorize take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of “fully protected” species, “specially protected mammal” species, and “specified birds” (CFGC Sections 3505, 3511, 4700, 4800, 5050, 5515, and 5517). If a project is planned in an area where a fully protected species, specially protected mammal, or a specified bird occurs, an applicant must design the project to avoid take.

Fully Protected Species and Resident and Migratory Birds

CFGC Sections 3511, 4700, 5050, and 5515 designate certain birds, mammals, reptiles and amphibians, and fish as fully protected species. Fully protected species may not be taken or possessed without a permit from the California Fish and Game Commission. CDFW may not authorize the take of such species except for necessary scientific research, for the protection of livestock, when the species is a covered species under an approved natural community conservation plan, or as legislatively authorized by the passing of a State Assembly Bill.

In addition, the CFGC prohibits the needless destruction of nests or eggs of native bird species (CFGC Section 3503), and it states that no birds in the orders of Falconiformes or Strigiformes (birds of prey) can be taken, possessed, or destroyed (CFGC Section 3503.5).

For the purposes of these state regulations, CDFW currently considers an active nest as one that is under construction or in use and includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and covered under these CFGC sections.

Porter–Cologne Water Quality Control Act

The intent of the Porter–Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The Regional Water Quality Control Boards have the primary responsibility to implement the provisions of statewide plans and basin plans. All waters of the state are regulated under the Porter–Cologne Water Quality Control Act, including isolated waters that are no longer regulated by the U.S. Army Corps of Engineers. Recent changes in state procedures require increased analysis and mitigation. Developments with impacts to jurisdictional waters of the state must demonstrate compliance with the goals of the Porter–Cologne Act by developing Stormwater Pollution Prevention Plans, Standard Urban Stormwater Mitigation Plans, and other measures to obtain a Clean Water Act Section 401 certification and/or Waste Discharge Requirement.

California Environmental Quality Act

CEQA requires identification of a project’s potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. The State CEQA Guidelines (CEQA Guidelines), Section 15380(b)(1), defines endangered animals or plants as species or subspecies whose “survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors” (14 CCR 15000 et seq.). A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists “in such small numbers throughout all or a significant portion of its range that it may become endangered if its

environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered ‘threatened’ as that term is used in the federal Endangered Species Act.” Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c). CEQA also requires identification of a project’s potentially significant impacts on riparian habitats (e.g., wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

Local

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) allows SJMSCP Permittees (San Joaquin Council of Governments; County of San Joaquin; and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy) to issue Incidental Take Permits or allows project applicants to mitigate for impacts to SJMSCP Covered Species resulting from open space land conversion resulting from covered projects. Once an Incidental Take Permit is issued, it allows the project applicant to unintentionally take a threatened or endangered species listed under FESA and CESA. Participation in the SJMSCP is voluntary for project applicants except when conditioned to participate by a permittee. Project applicants have four options to receive coverage, with approval by the San Joaquin Council of Governments (SJCOG 2000):

- Pay the appropriate fee. A fee is assessed depending on which of the four habitats the project lies within.
- Dedicate habitat lands as conservation easement or fee title.
- Purchase mitigation bank credits from a mitigation bank approved by SJMSCP.
- Propose an alternative mitigation plan, consistent with the goals of the SJMSCP and equivalent in biological value.

The Project applicant has informally consulted with the San Joaquin Council of Governments regarding Project use of the SJMSCP, and received a listing of Incidental Take Minimization Measures that would be required in the event the Project is permitted through the SJMSCP. These include measures to prevent burrowing owl from occupying the site prior to construction, pre-construction surveys for burrowing owl, and a range of measures to minimize stressors to plant and wildlife species during construction.

County of San Joaquin General Plan

The County of San Joaquin General Plan provides specific protection for biological resources, as described in the following goals and policies applicable to the Project (County of San Joaquin 2016):

Land Use Element

Goal LU-2 Promote efficient development and land use practices in new development that provide for the protection of vital resources and enhancement of communities.

Policy LU-2.8 Environmental Assessments and Mitigation: The County shall evaluate proposed new development projects for their potential environmental impacts and shall require all feasible mitigation of identified significant impacts. The County shall require, as appropriate, that projects for which an EIR is prepared the consideration of infill locations for new development in the alternatives evaluation.

Natural and Cultural Resources Element

Goal NCR-1 To conserve and enhance the County’s open space resources.

Policy NCR-1.1 Preserve Natural Areas: The County shall protect, preserve, and enhance important natural resource habitat, biological diversity, and the ecological integrity of natural systems in the County.

Goal NCR-2 To preserve and protect wildlife habitat areas for the maintenance and enhancement of biological diversity and ecological integrity.

Policy NCR-2.1 Protect Significant Biological and Ecological Resources: The County shall protect significant biological and ecological resources including: wetlands; riparian areas; vernal pools; significant oak woodlands and heritage trees; and rare, threatened, and endangered species and their habitats.

Policy NCR-2.2 Collaboration for Species Protection: The County shall collaborate with the California Department of Fish and Wildlife during the review of new development proposals to identify methods to protect listed species.

Policy NCR-2.3 San Joaquin County Multi-Species Habitat Conservation and Open Space Plan: The County shall continue to implement the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to mitigate biological impacts resulting from open space land conversion.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate Project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if a project would:

- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- C. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- G. Result in cumulatively considerable impacts to biological resources.

Direct impacts refer to the permanent loss of on-site habitat and the plant and wildlife species that it contains. For this analysis, all biological resources within the Project site are assumed to be subject to direct permanent impacts.

Indirect impacts refer to off-site and on-site “edge effects” that are short-term (i.e., not permanent) and result from Project construction, or long-term (i.e., permanent) due to the design of the Project and the effects it may have to adjacent resources. Examples of edge effects include dust, noise, general human presence that may temporarily disrupt species and habitat vitality, and construction-related soil erosion and runoff.

Cumulative impacts refer to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental effects. Individual effects may be changes resulting from a single project or several separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

4.2.4 Impacts Analysis

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

Less-than-Significant Impact with Mitigation Incorporated. The following section evaluates the Project’s effects on plant and wildlife species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Special-Status Plant Species

The Project site is not likely to support any special-status plants due to the lack of suitable habitat within or adjacent to the Project site, the extensively disturbed condition of the site and lack of natural vegetation communities, and because the site is outside of the known elevation range of certain species for which potential to occur was evaluated. Additionally, no special-status plants were detected on site or in the surrounding area during the October 2020 field survey conducted by Dudek biologists. Thus, no impact to special-status plant species is anticipated to occur as a result of the Project.

Special-Status Wildlife Species

Burrowing owl has a low potential to occur on the Project site. Disturbed, open habitat with sparse, low vegetation occurs on the site and would be suitable for burrowing owl foraging, but no suitable burrows were identified on site and a lack of small mammal activity was noted. If burrowing owls were to occur, construction activities such as grading and operation of heavy equipment could result in the abandonment or failure of active burrows either through direct destruction of burrows or through indirect effects from noise and vibration associated with construction equipment. This is a potentially significant impact. With implementation of MM-BIO-1, which involves measures to discourage ground squirrel presence, pre-construction surveys if burrowing owls are known to occupy the site prior to Project construction, and measures for impact avoidance if burrowing owls are detected, potential direct impacts to burrowing owl would be avoided and/or minimized.

The Project site currently provides suitable foraging habitat for burrowing owl, which would be removed during Project construction, thereby reducing the available foraging habitat for burrowing owl. However, no suitable burrows or ground squirrel activity were observed on the site during the field survey conducted by Dudek biologists. Burrowing owls require ground burrows for nesting, and therefore the site does not currently provide nesting opportunities for this species. Additionally, the site is relatively small compared to the surrounding agricultural area, which may contain suitable habitat for the species. Therefore, the removal of approximately 37.7 acres of foraging habitat constitutes a less-than-significant impact to this species.

Shrubs, bare ground, abandoned equipment, and built structures in or adjacent to the Project site and surrounding areas provide suitable nesting habitat for several local and migratory bird species protected by the federal Migratory Bird Treaty Act. Construction activities such as grading and operation of heavy equipment could result in the abandonment or failure of active nests either through direct destruction of nests or through indirect effects from noise and vibration associated with construction equipment. Additionally, protected species could become trapped in construction equipment or materials present on the site, such as small pipes with uncapped ends. With implementation of MM-BIO-2, which involves pre-construction surveys and nest avoidance if an active nest is detected, and MM-BIO-3, which includes measures to prevent unintentional wildlife entrapment such as capping ends of pipes and limiting (when feasible) suitable resources for birds to nest or perch on the Project site, potential direct impacts to protected nesting birds would be avoided and minimized, and impacts would be less than significant.

Threshold B: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The entire Project site is composed of disturbed/developed land because it was previously and recently the site of a biomass plant; it does not support any native vegetation communities. No riparian habitat or other sensitive natural communities are present on or adjacent to the Project site. According to the NWI and USGS topographic quad map containing the Project site, there are no wetlands or other waters previously mapped within the Project site that could support riparian vegetation (USFWS 2020b). Dominant plant species observed on the Project site during the field survey consisted of upland species. Constructed basins on the Project site were investigated for wetland plants and evidence of wetland soil and hydrology. These basins were primarily dominated by non-native plants normally associated with upland environments, including Russian thistle, five horn bassia, mouse barley (*Hordeum murinum*), and annual dogtails (*Cynosurus echinatus*). These species would not constitute riparian habitat. Thus, no impact to riparian habitat or other sensitive communities would occur as a result of the Project.

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

Less-than-Significant Impact. A formal jurisdiction delineation of the Project site was not conducted during the field survey. However, no potentially jurisdictional aquatic resources were identified during the field survey. According to the NWI and USGS topographic quad map containing the Project site, there are no wetlands or other waters previously mapped within the Project site (USFWS 2020b). Dominant plant species observed on the Project site during the field survey consisted of upland species not associated with wetland or stream features. Constructed basins on the Project site were investigated for wetland plants and evidence of wetland soil and hydrology. These basins were primarily dominated by non-native plants normally associated with upland environments, including Russian thistle, five horn bassia, mouse barley (*Hordeum murinum*), and annual dogtails (*Cynosurus echinatus*).

The basin in the northeast corner of the Project site receives run-off from the adjacent gravel roadways and other disturbed areas via two culvert outfalls located along the southern perimeter of the basin. Without these culverts the basin would not pond water on occasion. Thus, no direct impact is anticipated to occur to state or federally protected wetlands. Fugitive dust generated by construction activities is a potential indirect impact that could affect waters in the vicinity of the Project site, such as retention basins mapped as freshwater ponds within the property south of the Project site (USFWS 2020b). As described in Section 4.1, Air Quality, of this EIR, construction of the Project would comply with San Joaquin Valley Air Pollution Control District Regulation VIII (Fugitive PM₁₀ Prohibition), which requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter (PM₁₀) from crossing any property line. San Joaquin Valley Air Pollution Control District Regulation VIII is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Therefore, fugitive dust impacts on adjacent wetlands would be avoided and minimized through compliance with existing regulations. Thus, indirect impacts to state or federally protected waters would be less than significant.

Threshold D: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less-than-Significant Impact. Wildlife corridors are linear features that connect large areas or patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small areas or patches of land that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that essentially function as “stepping stones” for wildlife dispersal. The highly disturbed condition of the site and existing perimeter fencing, in conjunction with existing development and agricultural activity that surrounds the Project site, greatly limits the site’s suitability as a wildlife movement corridor or habitat linkage. The Project site does not contain migratory habitat for aquatic species. The disturbed site is relatively small compared to the greater agricultural area in which the site is located and is of marginal value to migratory birds. Thus, implementation of the Project would constitute a less-than-significant impact to the movement of resident or migratory fish or wildlife species.

Threshold E: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The Project complies with and would not conflict with the goals and policies related to land use and natural resources included in the County of San Joaquin General Plan (County of San Joaquin 2016). Goals and policies applicable to the Project are provided in Section 4.2.2, Relevant Plans, Policies, and Ordinances. No impact would occur.

Threshold F: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less-than-Significant Impact. The Project intends to receive species take coverage through the SJMSCP. The SJMSCP provides very broad take coverage for species listed under FESA and CESA, but also includes coverage for 66 species that are not listed under either act but for which mitigation is often required under CEQA. In total, the SJMSCP covers 97 species (SJCOG 2000). Based on the habitat conditions present at the Project site, all species requiring mitigation would be covered under the SJMSCP. In the event that the Project cannot or does not use the SJMSCP for mitigation, the Project would implement similar incidental take minimization and mitigation measures,

and would mitigate any impacts to SJMSCP Covered Species through permitting with CDFW under CESA and/or with USFWS through FESA. Impacts would be less-than-significant.

Threshold G: Would the Project result in cumulatively considerable impacts to biological resources?

Less-than-Significant Impact with Mitigation Incorporated. Because of the relatively small scale of the Project and the existing level of human disturbance within the Project site, no considerable cumulative impacts related to habitat conversion or increased building utilization are anticipated. The Project site is located in an area that has been developed for industrial and agricultural purposes and has nearby residential development. Therefore, implementation of the Project would not result in a significant reduction of available habitat, migration corridors, or other essential elements required by special-status species in the region. Due to the lack of biological value provided by the Project site, the Project's contribution to any cumulative effects on biological resources would be considered negligible.

Through mitigation (MM-BIO-1, MM-BIO-2, and MM-BIO-3) and compliance with regulatory requirements, Project construction would not create significant risks that could combine with other impacts to create a significant and cumulatively considerable impact on biological resources. For these reasons, the Project would not result in cumulatively considerable impacts related to biological resources.

4.2.5 Mitigation Measures

MM-BIO-1 Avoid and Minimize Impacts to Burrowing Owl. Measures identified in the Incidental Take Minimization Measures (ITMM) document (SJCOG 2020) shall be implemented to ensure that Project-related impacts to burrowing owl are avoided or minimized. In the event that the SJMSCP is not used to mitigate species impacts, the following measures, similar to those included in the ITMM document, shall be implemented.

The following measures to discourage ground squirrel presence, which would limit habitat suitability for burrowing owls, shall be implemented:

- New vegetation shall be planted or existing vegetation shall be retained entirely covering the site at a height of approximately 36 inches above the ground. Vegetation shall be retained until construction begins. Vegetation shall discourage ground squirrel and burrowing owl use of the site. Alternatively, the Project applicant may disc or plow the entire Project site to destroy any ground squirrel burrows. Before burrows are destroyed, ground squirrels shall be removed through one of the following approved methods to prevent reoccupation of the Project site: anticoagulants, zinc phosphide, fumigants, or traps. Detailed descriptions of these methods are included in San Joaquin Multi-Species Habitat Conservation and Open Space Plan, Appendix A, Protecting Endangered Species, Interim Measures for Use of Pesticides in San Joaquin County, dated March 2000.
- If burrowing owls are known to occupy the site prior to Project construction, pre-construction surveys for burrowing owls shall be conducted no less than 14 days, and again within 24 hours, prior to commencement of ground disturbance. Any burrowing owl pre-construction surveys shall be conducted following the protocol within the Staff Report on Burrowing Owl Mitigation (CDFW 2012).

- During the breeding season (February 1 through August 31), any occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless the Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies (representatives on the TAC), or unless a qualified biologist approved by the Permitting Agencies, verifies through non-invasive means that either (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, a Burrowing Owl Exclusion Plan shall be developed and approved by the applicable Department of Fish and Wildlife San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) representative/office, and habitat shall be mitigated in accordance with the Staff Report (CDFW 2012), then the burrow can be destroyed. Pre-construction surveys following destruction of burrows and prior to initial construction activities are required (24 hours prior) to ensure owls do not re-colonize the Project site. If Project activities are delayed or suspended for more than 15 days during the breeding season, surveys shall be repeated.
- During the non-breeding season (September 1 through January 31), burrowing owls may be evicted after a Burrowing Owl Exclusion Plan is developed and approved by the applicable Department of Fish and Wildlife SJMSCP representative/office and habitat is mitigated in accordance with the Staff Report (CDFW 2012).

Pre-construction surveys following destruction of burrows and prior to initial construction activities are required (24 hours prior) to ensure owls do not re-colonize the Project site. If owls are found within 50 meters of the Project site, it is recommended that visual screens or other measures are implemented to limit disturbance of the owls without evicting them from the occupied burrows.

MM-BIO-2

Avoid and Minimize Impacts to Native and Migratory Nesting Birds. Mitigation measures identified in the Incidental Take Minimization Measures (ITMM) document (SJCOG 2020) shall be implemented to avoid and minimize impacts to native and migratory nesting birds. In the event that the San Joaquin Multi-Species Habitat Conservation and Open Space Plan is not used to mitigate species impacts, the following measures, similar to those included in the ITMM document, shall be implemented.

- Pre-construction nesting bird surveys shall be conducted no greater than 14 days prior to commencement of construction activities (including ground disturbance or vegetation removal), if Project activities must commence during the nesting bird season (February 1 through September 15).
- If an active bird nest is detected during pre-construction surveys or at any other time during Project construction, appropriate disturbance avoidance buffers shall be established by a qualified biologist. Nest avoidance buffers shall be a minimum of 100 feet surrounding an active nest, but vary depending on species and site-specific circumstances. Avoidance buffers for state or federally listed special-status species are typically 500 feet. Construction activities shall not be permitted within any established nest buffer until the nest is determined by a qualified biologist to be inactive.
- All vegetation removal, trimming, and grading of vegetated areas shall occur outside of the peak bird breeding season to the maximum extent practicable. Available resources, such as internet-based tools (e.g., the U.S. Fish and Wildlife Service's Information, Planning and Conservation system and Avian Knowledge Network) shall be used to identify peak breeding

months for local bird species or the local Service Migratory Bird Program Office shall be contacted for breeding bird information.

- A vegetation maintenance plan shall be prepared that outlines vegetation maintenance activities and schedules so that direct bird impacts do not occur.

To the maximum extent practicable, construction activities shall be limited to the time between dawn and dusk to avoid the illumination of adjacent habitat areas. If construction activity time restrictions are not possible, down-shielding or directional lighting shall be used to avoid light trespass into bird habitat (i.e., use a “Cobra”-style light rather than an omnidirectional light system to direct light down to the site). To the maximum extent practicable while allowing for public safety, low-intensity energy-saving lighting (e.g. low-pressure sodium lamps) shall be used. Illumination of lighting on associated construction and operation structures shall be minimized by using motion sensors or heat sensors.

MM-BIO-3 Avoid and Minimize Unintentional Wildlife Entrapment. Measures identified in the Incidental Take Minimization Measures document (SJCOG 2020) shall be implemented to avoid and minimize impacts related to wildlife entrapment in Project equipment and materials, and to prevent birds from perching or nesting on the Project site where they would be unsafe or vulnerable to potential disturbance, as follows:

- Prior to the nesting bird season, anti-perching devices shall be installed on equipment or structures within the Project site that present a suitable place for birds to nest or perch. Alternatively, access to potentially suitable nesting surfaces shall be enclosed with mesh netting, chicken wire fencing, or other suitable exclusion material or otherwise prevented until construction activities are complete or until the structure is removed.
- During the time that the birds are trying to build or occupy their nests (generally, April through August, depending on the geographic location), potential nesting surfaces shall be monitored at least once every 3 days for any nesting activity, especially where bird use of structures is likely to cause take. It is permissible to remove non-active nests (without birds or eggs), partially completed nests, or new nests as they are built (prior to occupation). If birds have started to build any nests, the nests shall be removed before they are completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters. If an active nest becomes established (i.e., there are eggs or young in the nest), all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied. Construction activities that may displace birds after they have laid their eggs and before the young have fledged shall not be permitted. If the Project continues into the following spring, this cycle shall be repeated. When work is complete, all netting shall be removed and properly disposed of.
- To prevent entrapment and mortality of smaller wildlife and birds, all pipes, culverts, or similar structures that are stored at the construction site vertically or horizontally for one or more overnight periods shall be securely capped on both ends prior to storage and thoroughly inspected for wildlife prior to implementation at the Project site. All hollow pipes or posts installed as part of the Project and exposed to the environment shall be capped, screened, or filled with material by the Project proponent prior to the end of the workday.
- To prevent entanglement of raptor talons, any post with exposed perforations installed on the Project site and exposed to the environment shall have the holes permanently filled within the top 6 inches of the post upon installation.

- Any open trenches, pits, or holes with a depth larger than 1 foot shall be covered at the conclusion of work each day with a hard, non-heat-conductive material (i.e., plywood). No netting, canvas, or material capable of trapping or ensnaring wildlife shall be used to cover open trenches. If use of a hard cover is not feasible, multiple wildlife escape ramps shall be installed, constructed of wood or installed as an earthen slope, in each open trench, hole, or pit that is capable of allowing large (i.e., deer) and small (i.e., snakes) animals to escape on their own. Prior to the initiation of construction each day and prior to the covering of the trench at the conclusion of work each day, on-site personnel shall inspect the open trench, pit, or hole for wildlife. If wildlife is discovered, it shall be allowed to leave on its own.

4.2.6 Level of Significance After Mitigation

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

The Project could result in potentially significant impacts to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS, including burrowing owl and nesting migratory birds protected under the Migratory Bird Treaty Act. Incorporation of MM-BIO-1, MM-BIO-2, and MM-BIO-3 would be required to reduce impacts to a level of **less than significant**.

Threshold B: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The Project would have **no impact** on riparian habitat or other sensitive natural communities.

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

The Project would result in **less-than-significant impacts** with regard to state or federally protected wetlands.

Threshold D: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project would have a **less-than-significant impact** with regard to the movement of resident or migratory fish or wildlife species.

Threshold E: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project complies with and would not conflict with the goals and policies related to land use and natural resources. **No impact** would occur.

Threshold F: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project intends to receive species take coverage through the SJMSCP; as such, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Impacts would be **less than significant**.

Threshold G: Would the Project result in cumulatively considerable impacts to biological resources?

Through mitigation (MM-BIO-1, MM-BIO-2, and MM-BIO-3) and compliance with regulatory requirements, Project construction would not create significant risks that could combine with other impacts to create a significant and cumulatively considerable impact on biological resources. For these reasons, the Project would result in **less-than-cumulatively considerable impacts** related to biological resources.

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4.3 Cultural and Tribal Cultural Resources

This section describes the existing cultural and tribal cultural resources conditions of the 14800 W. Schulte Road Logistics Center (Project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the Cultural Resources Inventory Report for the 14800 W. Schulte Road Logistics Center Project, City of Tracy, San Joaquin County, California – Negative Findings, prepared by Dudek in January 2021 (Appendix D).

4.3.1 Existing Conditions

The Project site is located within southwestern unincorporated San Joaquin County, California. The Project site is located at 14800 West Schulte Road and is composed of one parcel (Assessor's Parcel Number 209-240-23). The Project site is bounded by Schulte Road and agricultural uses to the north, Quality Road and agricultural uses to the east, a manufacturing/warehouse use to the south, and a warehouse/distribution use to the west. Under existing conditions, the Project site is vacant and contains bare expanses of soil interspersed with ruderal. The Project site was formerly used as a biomass energy facility, which was decommissioned and demolished in 2019.

Background Research

This section documents the results of a California Historical Resources Information System (CHRIS) records search conducted at the Central California Information Center (CCaIC); historical maps and aerial photographs review; a search of the California Native American Heritage Commission's (NAHC) Sacred Lands File (SLF); and formal tribal consultation completed by the lead agency, the County of San Joaquin (County), pursuant to California Assembly Bill (AB) 52.

California Historical Resources Information System Records Search

On October 9, 2020, a CHRIS records search was conducted by staff of the CCaIC, located on the campus of California State University, Stanislaus. The search of the Project site and a 0.5-mile (2,640 feet) radius (i.e., study area) included the CCaIC's collections of mapped prehistoric, historic, and built environment resources; Department of Parks and Recreation Site Records; and technical reports. The search also included historical maps of the study area; the National Register of Historic Places (NRHP); the California Register of Historical Resources (CRHR); the California Historic Property Data File; and the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. The records search results are provided in Appendix D.

CCaIC records identified 12 previously conducted cultural resources technical investigations within 0.5 miles of the Project site between 1989 and 2013. Of these, three intersect or overlap the Project site. None of these previous investigations identified cultural resources within the current Project site. The records search also identified four previously recorded cultural resources within 0.5 miles of the Project site; however, none of these resources are located within or adjacent to the Project site.

Historical Maps and Aerial Photographs Review

Dudek consulted historical topographic maps and aerial photographs through the Nationwide Environmental Title Research (NETR) to understand development of the Project site and surrounding properties. Topographic maps are available from 1916 to 2018, and aerial images are available from 1949 to 2016 (Appendix D).

Topographic maps show the Project site as undeveloped from 1916 through 1951. The 1953 topographic map shows a pipeline transecting the northwest section of the Project site toward the southeast section. The 1965 topographic map shows no significant change to the Project site since the 1953 topographic map was created. The 1969 topographic map shows Quality Road and a structure within the northeast corner of the Project site. The following topographic maps show no change to the Project site until 2012. The 2012 topographic map does not show the pipeline first seen in 1953, Quality Road, or the structure that was previously present within the northeast corner of the Project site; instead, the topographic map shows a pool of water within the northeast corner of the Project site. Aside from understanding a general level of development, topographic maps do not depict minute changes within the Project site or surrounding blocks (Appendix D).

The 1949 aerial shows a line transecting from the northwest section of the Project site toward the southeast section, presumably the pipeline shown on the 1953 topographic map. Other than the presence of this pipeline, the Project site appears to have been undeveloped in 1949. The 1967 and 1968 aerials show the Project site being used for agricultural purposes. The 1968 aerial shows the pipeline originally seen in 1953; it is not visible in any aerials after 1968. There appears to have been a structure within the northeast corner of the Project site, which is consistent with the 1969 topographic map; however, the quality of the aerial does not illustrate what the structure was. In the 1982 aerial, the Project site no longer appears to be used for agricultural purposes. At the time the 1982 aerial was taken, the Project site was cleared except for the structure within the northeast corner. From 1993 to 2016, aerials show that the Project site was being used as a biomass facility (Appendix D).

Native American Coordination

Sacred Lands File Search and Tribal Outreach

Dudek contacted the NAHC on October 6, 2020, requesting a review of its SLF for the Project site. In a response letter received via email on November 12, 2020, the NAHC stated that the results of the SLF search were negative for known cultural resources.

Assembly Bill 52

A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment (California Public Resources Code [PRC] Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The Project is subject to compliance with AB 52.

On December 18, 2020, in compliance with the requirements of AB 52, Dudek personnel mailed letters of notification, on behalf of the County, concerning the Project site to each contact on the NAHC's AB 52 list that has requested project notifications from the County pursuant to AB 52 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area. These notification letters included a Project map and description inquiring if the tribe would like to discuss the Project and the potential to impact any potential TCRs. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is

assumed that consultation is declined. To date, no responses have been received as a result of the County’s AB 52 consultation notification. Therefore, government-to-government consultation initiated by the County has not resulted, to date, in the identification of a TCR within or near the Project site. Table 4.3-1 summarizes the results of the AB 52 process for the Project. The confidential AB 52 consultation results are on file with the County.

Table 4.3-1. Assembly Bill 52 Native American Tribal Outreach Results

AB 52 Contact	Method and Date of Notification	Response to County Notification Letters
California Valley Miwok Tribe	Certified Mail; December 18, 2020	No response to date
North Valley Yokuts Tribe	Certified Mail; December 18, 2020	No response to date
United Auburn Indian Community	Certified Mail; December 18, 2020	No response to date
California Tribal Tanf Partnership	Certified Mail; December 18, 2020	No response to date
Cultural Resources Director, Buena Vista Rancheria of Me-Wuk Indians	Certified Mail; December 18, 2020	No response to date

Survey

Dudek personnel conducted an intensive-level pedestrian survey of the Project site on October 12, 2020. The perimeter of the Project site consists of graded roadways and staging areas with retention basins along the northern end of the site adjacent to Schulte Road, and spoils piles more than 20 feet in height along the southern end of the site, north of an Owens Glass facility. Topsoil in the center of the Project site has been displaced, and an active excavation greater than 3 feet below the surface was ongoing on the date of the survey. Ground visibility varied across the Project site, but the majority of the site exhibited greater than 70% visibility. No cultural resources were identified within the Project site as a result of the survey.

Paleontological Setting

The following summary of the geological evolution of the Central Valley is summarized in the San Joaquin County’s General Plan EIR (County of San Joaquin 2014). During the Mesozoic Era (208–65 million years ago), the Sierra Nevada formed, but the region that would become the San Joaquin Valley lay several thousand feet below the surface of the Pacific Ocean. During the Late Cretaceous Period (75–65 million years ago), flowering plants, early dinosaurs, and the first birds and mammals appeared. The basic form of the Great Central Valley took shape during the Cenozoic period, first as islands, then as mountains. During the late Cenozoic Era (65–2 million years ago), the Sierra Nevada eroded to mere hills compared to their earlier appearance, the Coast Ranges rose, and the San Joaquin Valley began to form.

During the Paleocene Epoch (65–53 million years ago), dinosaurs became extinct and mammals gradually evolved as the dominant group of animal life. During the Eocene Epoch (53–39 million years ago), the western edges of the San Joaquin Valley rose above sea level. Sedimentation and tectonic uplift of geological formations continued until two million years ago. In the subsequent Oligocene Epoch (39–23 million years ago), sedimentation continued, and during the Miocene Epoch (23–5 million years ago) the Diablo Range was uplifted. The Pliocene Epoch (5–2 million years ago) was a time of tremendous uplift, and great quantities of sediment eroded from the nearby mountain ranges accumulated in the valley, eventually forming a deposit thousands of feet thick. In the Pleistocene Epoch (2 million to 10,000 years ago), the Sierra Nevada range was increasingly elevated and glaciated, resulting in the formation of spectacular features such as Yosemite Valley. During the Holocene Epoch (10,000 years ago to the present), the San Joaquin Valley was above sea

level and achieved its present appearance, 466 miles long and 19 to 50 miles wide, enclosed by the Siskiyou, Sierra Nevada, Tehachapi, and Coast Ranges on the north, east, south, and west, respectively. The valley contained freshwater lakes and rivers attractive to herds of prehistoric grazing animals, including Columbian Mammoth, camel, bison, and native horse. The fossil remains of these creatures have been found in San Joaquin County and adjacent areas. According to standards and guidelines published by the Society of Vertebrate Paleontology, sedimentary rock units with a high potential for containing significant nonrenewable paleontological resources are those within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and those which add to the existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally.

The vast majority of paleontological specimens from San Joaquin County have been found in rock formations in the foothills of the Diablo Mountain Range. However, remains of extinct animals such as mammoth, could be found virtually anywhere in San Joaquin County, especially along watercourses such as the San Joaquin River and its tributaries. Other formations that are known to have a moderate to high potential to bear fossils include the Neroly Formation, Moreno Shale deposits, and Panoche Formations. However, these rock formations are not considered unique geologic features.

According to records on file with the University of California Museum of Paleontology (UCMP), eighty fossils have been found and recorded within San Joaquin County. The UCMP database lists several localities within the vicinity of the Project where Pleistocene vertebrate finds were made in 1948 during construction of the Delta-Mendota Canal. These fossils include mammoth/mastodon (*Mammut sp.*), horse (*Equus sp.*), pocket gopher (*Thomomys sp.*) and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans or policies related to cultural or historic resources that are applicable to the Project.

State

The California Register of Historical Resources

In California, the term “historical resource” includes “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (PRC Section 5020.1[j]). In 1992, the California legislature established the CRHR “to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.

- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 California Code of Regulations [CCR] 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Assembly Bill 52

AB 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

Consultation with Native Americans

AB 52 formalizes the consultation process between lead agencies and tribal representatives, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project area. This includes tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or EIR.

Tribal Cultural Resources

Section 4 of AB 52 adds Sections 21074 (a) and (b) to the PRC, addressing TCRs and cultural landscapes. Section 21074(a) defines “tribal cultural resources” as one of the following:

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.
 - 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.

Section 1 (a)(9) of AB 52 establishes that “a substantial adverse change to a tribal cultural resource has a significant effect on the environment.” Effects on TCRs should be considered under the California Environmental Quality Act (CEQA). Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures “capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource.” Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant

effects to TCRs, the consultation must include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) must include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (PRC Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NRHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The Native American Graves Protection and Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are relevant to the analysis of archaeological and historic resources:

- PRC Section 21083.2(g) defines “unique archaeological resource.”
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) define historical resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource. It also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b)–(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures, and identify preservation-in-place as the preferred manner of mitigating impacts to significant archaeological sites.

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (PRC Section 21084.1; CEQA Guidelines Section 15064.5[b]). A “historical resource” is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question (a) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (d) has yielded, or may be likely to yield, information important in pre-history or history.

The term “historical resource” also includes any site described in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]).

CEQA also applies to “unique archaeological resources.” PRC Section 21083.2(g) defines a “unique archaeological resource” as any 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:

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

In 2014, CEQA was amended to apply to “tribal culture resources” as well, but the amendment did not provide a definition for such resources or identify how they were to be evaluated or mitigated (PRC Sections 21084.2 and 21084.3). Instead, PRC Section 21083.09 required that the Office of Planning and Research develop and adopt guidelines for analyzing “tribal cultural resources” by July 1, 2016. As of the effective date of this report, however, those guidelines have not been finalized or adopted. Consequently, this report addresses only historic resources and unique archaeological resources.

All historical resources and unique archaeological resources as defined by statute are presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]). A site or resource that does not meet the definition of “historical resource” or “unique archaeological resource” is not considered significant under CEQA and need not be analyzed further (PRC Section 21083.2[a]; CEQA Guidelines Section 15064.5[c][4]).

Under CEQA, a significant cultural impact results from a “substantial adverse change in the significance of an historical resource [including a unique archaeological resource]” due to the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines Section 15064.5[b][1]; PRC Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

CEQA Guidelines Section 15064.5(b)(2)

Pursuant to these sections, CEQA first evaluates whether a project site contains any “historical resources,” then assesses whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource’s historical significance is materially impaired. When a project significantly affects unique archeological resources, CEQA imposes special mitigation requirements. Specifically, “[i]f it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

1. Planning construction to avoid archeological sites.
2. Deeding archeological sites into permanent conservation easements.
3. Capping or covering archeological sites with a layer of soil before building on the sites.
4. Planning parks, greenspace, or other open space to incorporate archeological sites.”

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (California Health and Safety Code Section 7050.5[b]). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code Section 7050.5[c]). The NAHC will notify the “most likely descendant.” With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by the NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains, and items associated with Native Americans.

Local

San Joaquin County 2035 General Plan – Cultural and Historic Resources Element

Section 3.4 of San Joaquin County’s 2035 General Plan Policy Document, adopted in 2016, details the County’s goals for the protection of valuable architectural, historical, archaeological, and cultural resources under Goal NCR-6. The following goals for cultural resources may be applicable to Project (County of San Joaquin 2016):

Goal NCR-6 To protect San Joaquin County’s valuable architectural, historical, archeological, and cultural resources.

Policy NCR-6-1 Protect Historical and Cultural Resources: The County shall protect historical and cultural resources and promote expanded cultural opportunities for residents to enhance the region’s quality of life and economy.

Policy NCR-6-2 No Destruction of Resources: The County shall ensure that no significant architectural, historical, archeological, or cultural resources are knowingly destroyed through County action.

Policy NCR-6-3 Encourage Public and Private Preservation Efforts: The County shall continue to encourage efforts, both public and private, to preserve the historical and cultural heritage of San Joaquin County and its communities and residents.

Policy NCR-6-5 Protect Archeological and Historical Resources: The County shall protect significant archeological and historical resources by requiring an archeological report be prepared by a qualified cultural resource specialist prior to the issuance of any discretionary permit or approval in areas determined to contain significant historic or prehistoric archeological artifacts that could be disturbed by project construction.

Policy NCR-6-6 Tribal Consultation: The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

Policy NCR-6-9 Educational Programs: The County shall support educational and outreach programs that promote public awareness of and support preservation of historical and cultural resources.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate project impacts to cultural resources and TCRs are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources and TCRs would occur if a project would:

- A. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- C. Disturb any human remains, including those interred outside of dedicated cemeteries.
- D. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
- E. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.
- F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- G. Result in a cumulatively considerable impact to cultural or tribal cultural resources.

4.3.4 Impacts Analysis

Threshold A: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

Less-than-Significant Impact. As part of the cultural resources study prepared for the Project (Appendix D), a records search of the CHRIS at the CCalC was conducted on October 9, 2020. The CHRIS search included a review of mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation site records; technical reports; and archival resources. Additional consulted sources include historical maps of the Project site, the NRHP, the CRHR, the California Historic Property Data File, the lists of California State Historical Landmarks and California Points of Historical Interest, and the Archaeological Determinations of Eligibility. In addition, a pedestrian survey of the Project site was conducted on October 12, 2020. No historical resources were identified within the Project site or immediate vicinity as a result of the CHRIS records search or intensive pedestrian survey. Moreover, under existing conditions, the Project site is vacant. Therefore, no impacts associated with historical resources would occur under CEQA.

Threshold B: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-than-Significant Impact with Mitigation Incorporated. No archaeological resources were identified within the Project site as a result of the CHRIS records search, NAHC SLF search, or intensive-level pedestrian survey. Additionally, The Project site has been substantially altered since its use in the mid-1900s when it was plowed and planted as part of agricultural operations. Additionally, activities associated with development of the biomass facility in the 1990s and its demolition in the 2010s resulted in substantial alternation of the site. Other ground disturbances that have altered the site include the pipeline that once bisected the site northwest to southeast and the two drainage basins along the northern edge of the Project site, including the active ground disturbance for Project well installation that was observed during the archaeological survey.

Although no archaeological resources were identified within the Project site, there is the potential to encounter unanticipated archaeological resources during the course of construction. Management recommendations are provided in Mitigation Measure (MM) CUL-1 to reduce potential impacts to unanticipated archaeological resources during construction activities. Therefore, with implementation of MM-CUL-1, impacts would be less than significant.

Threshold C: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Less-than-Significant Impact with Mitigation Incorporated. No prehistoric or historic burials, including those interred outside of dedication cemeteries, were identified within the Project site as a result of the CHRIS records search, NAHC SLF search, or pedestrian survey. Therefore, the likelihood of encountering human remains within the subsurface of the Project site is low. However, the possibility of encountering human remains within the Project site exists. The discovery of human remains would require handling in accordance with PRC 5097.98, which states that in the event that human remains are discovered during construction, construction activity shall be halted, and the area shall be protected until consultation and treatment can occur as prescribed by law. Therefore, with adherence to state law and with implementation of MM-CUL-2, impacts would be less than significant.

Threshold D: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact with Mitigation Incorporated. As described above, several fossils have been found in the vicinity of the Project area in 1948 during construction of the Delta Mendota Canal. These fossils include mammoth/mastodon, horse, pocket gopher, and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone. As such, Project development has the potential to impact unknown paleontological resources because of its grading and construction activities. However, the Project site has been subject to extensive disturbance, including previous grading and utility excavation activities, that occurred as a result of the prior on-site biomass energy facility. In addition, previous development of the Project site involved the placement of artificial fill on the site. Human-transported fill materials generally do not contain significant paleontological resources on or very near the surface immediately underlying the Project site. These activities have resulted in a Project site that is highly variable, containing various depressions as deep as 20 feet below ground surface. Given the extent of this disturbance, it is unlikely that paleontological resources, if they were ever present on site, would remain intact. Nonetheless, it is possible that significant fossils could be discovered during excavation activities, even in areas with a low likelihood of occurrence. Fossils encountered during excavation could be inadvertently damaged. As such, MM-CUL-3 shall be required. MM-CUL-1 would require that in the event that paleontological resources are discovered, all construction work occurring within 50 feet of the find shall immediately stop until a qualified paleontologist, as defined by the Society of Vertebrate Paleontology's 2010 guidelines, can assess the nature and importance of the find and recommend either salvage or recovery of the resource. record the find and allow work to continue or recommend salvage and recovery of the resource. Implementation of MM-CUL-3 would ensure that the Project's impacts with regard to unique paleontological resources would be less than significant.

Threshold E: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

AND

Threshold F: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less-than-Significant Impact with Mitigation Incorporated. Based on the CHRIS and NAHC SLF records searches, including background research as summarized above, no previously recorded archaeological resources of Native American origin or TCRs listed in the CRHR or a local register or in any other of the records reviewed were identified within the Project site. Further, no TCRs have been identified by California Native American tribes as part of the County's AB 52 notification process, and no California Native American tribes requested consultation with the County.

Although impacts to identified TCRs would be less than significant as a result of tribal consultation efforts, the potential to impact certain archaeological resources can also apply to TCRs. A careful review of all available archival records and building development for the Project site indicates that the Project site is of limited suitability to support the presence of cultural resources, and the likelihood of encountering any buried archaeological deposits during ground disturbance activities associated with the Project is low, but possible. As such, implementation of MM-CUL-1 would occur to address the potential for inadvertent discovery of archaeological resources and, by association, is sufficient to respond to any TCRs inadvertently discovered during ground-disturbing activities.

Based on the results of the CHRIS record search and SLF search, no previously recorded archaeological resources of Native American origin or Native American sacred sites were identified within the Project site. Additionally, the AB 52 government-to-government process initiated by the County has not resulted in the identification of a geographically defined TCR within or near the Project site. As such, the County determined that no TCRs, pursuant to the criteria set forth in PRC Section 5024.1, are within the Project site. Therefore, with implementation of MM-CUL-1, the Project would not cause a substantial adverse change in the significance of a TCR as defined in PRC Section 21074, and impacts would be less than significant.

Threshold G: Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?

Less-than-Significant Impact with Mitigation Incorporated. Cumulative impacts on cultural resources and TCRs consider whether impacts of the Project, together with related projects identified within the vicinity of the Project site when taken as a whole, would substantially diminish the number of cultural or tribal resources within the same or similar context or property type. However, impacts to cultural resources and TCRs, if any exist, tend to be site specific.

As previously discussed, there are no known cultural resources or TCRs on the Project site, and as such, the Project site is not part of an existing or known grouping or district of cultural resources or TCRs that would be impacted as part of the cumulative impacts of other projects. However, for archaeological resources, past, present, and reasonably foreseeable cumulative projects may require extensive excavation in culturally sensitive areas and, thus, may result in adverse effects to known or previously unknown, inadvertently discovered archaeological resources.

Historical resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the Project, and any impacts would be mitigated, as applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources and TCRs would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the Project's contribution toward cumulative impacts would be less than significant with mitigation incorporated (MM-CUL-1 and MM-CUL-2).

4.3.5 Mitigation Measures

MM-CUL-1 Inadvertent Discovery of Archaeological Resources. In the event that potential archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending on the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5[f]; California Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. Avoidance shall be considered the preferred option for treatment of identified archaeological

resources. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted.

MM-CUL-2 **Inadvertent Discovery of Human Remains.** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any adjacent area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC shall immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated Native American representative shall then determine, in consultation with the property owner, the disposition of the human remains.

MM-CUL-3 In the event that paleontological resources (fossil remains) are exposed during construction activities for the Project, all construction work occurring within 50 feet of the find shall immediately stop until a qualified paleontologist, as defined by the Society of Vertebrate Paleontology's 2010 guidelines, can assess the nature and importance of the find. Depending on the significance of the find, the paleontologist may record the find and allow work to continue or recommend salvage and recovery of the resource. All recommendations will be made in accordance with the Society of Vertebrate Paleontology's 2010 guidelines and shall be subject to review and approval by the County of San Joaquin. Work in the area of the find may only resume upon approval of a qualified paleontologist.

4.3.6 Level of Significance After Mitigation

Threshold A: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

The Project would have a **less-than-significant impact** with regard to the substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 for activities occurring on the Project site. No mitigation is required.

Threshold B: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

The Project would have a potentially significant impact with regard to the inadvertent discovery of archaeological resources during construction activities. With implementation of MM-CUL-1, impacts to previously unknown archaeological resources within the Project site would be **less than significant**.

Threshold C: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Project would have a potentially significant impact with regard to the inadvertent discovery of human remains during construction activities. With adherence to state law and implementation of MM-CUL-2, impacts would be **less than significant**.

Threshold D: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Project would have a potentially significant impact with regard to the inadvertent discovery of paleontological resources during construction activities. With implementation of MM-CUL-3, impacts would be **less than significant**.

Threshold E: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

AND

Threshold F: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Although impacts to identified TCRs would be less than significant as a result of tribal consultation efforts, the potential to impact certain archaeological resources can also apply to TCRs. With implementation of CUL-1, the Project would have a **less-than-significant impact** with regard to TCRs.

Threshold G: Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?

Cumulative impacts would be potentially significant for cultural and paleontological resources. However, with implementation of MM-CUL-1 for archaeological resources, MM-CUL-2 for human remains, and MM-CUL-3 for paleontological resources, impacts would be **less than significant**. Cumulative impacts would be less-than-cumulatively considerable for TCRs and no mitigation is required.

4.3.7 References Cited

County of San Joaquin. 2014. *San Joaquin County General Plan Environmental Impact Report*. October 2014. <https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/Environmental%20Impact%20Reports/GENERAL%20PLAN%202035%20-%20DRAFT%20EIR.pdf>

County of San Joaquin. 2016. *San Joaquin County General Plan*. December 2016. <https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/General%20Plan%202035/GENERAL%20PLAN%202035.pdf>.

4.4 Energy

This section describes the existing energy conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared by Dudek in January 2021 (Appendix B).
- Energy Calculations prepared by Dudek in January 2021 (Appendix B).
- Traffic Impact Analysis prepared by Advanced Mobility Group in December 2020 (Appendix F).

4.4.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration, California used approximately 255,224 gigawatt hours of electricity in 2018 (EIA 2020a). By sector in 2017, commercial uses utilized 46% of the state’s electricity, followed by 35% for residential uses and 19% for industrial uses (EIA 2020a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state’s energy efficiency building standards and efficiency and conservation programs, California’s electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2020b).

Pacific Gas & Electric Company (PG&E) provides electrical and natural gas service to the region. Incorporated in California in 1905, PG&E is one of the largest combination natural gas and electric utilities in the United States. It currently provides service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The service area includes 106,681 circuit miles of electric distribution lines, 18,466 circuit miles of interconnected transmission lines, 42,141 miles of natural gas distribution pipelines, and 6,438 miles of transportation pipelines. PG&E and other utilities in the state are regulated by the California Public Utilities Commission (CPUC) (PG&E 2020). According to the California Energy Commission (CEC), approximately 78 billion kilowatt-hours of electricity were used in PG&E’s service area in 2019 (CEC 2020a).

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,154,030 million cubic feet of natural gas in 2019 (EIA 2020c). Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. The majority of California’s natural gas customers are residential and small commercial customers (core customers), which accounted for approximately 35% of the natural gas delivered by California utilities in 2018 (CPUC 2020). Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 65% of the natural gas delivered by California utilities (CPUC 2020). The CPUC regulates California natural gas rates and natural gas services, including in-state transmission

and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. Biogas (e.g., from wastewater treatment facilities or dairy farms) is just beginning to be delivered into the gas utility pipeline systems, and the state has been encouraging its development (CPUC 2020). In 2019, PG&E delivered approximately 4.9 billion therms of natural gas to the region, with 3 billion therms for non-residential use and 1.9 billion therms for residential use (CEC 2020b, 2020c).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 681 million barrels of petroleum in 2018, with the majority (584 million barrels) used for the transportation sector (EIA 2020d). This total annual consumption equates to a daily use of approximately 1.9 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 78.4 million gallons of petroleum per day, adding up to an annual consumption of 28.7 billion gallons of petroleum. By sector, transportation uses utilize approximately 85.5% of the state’s petroleum, followed by 11.1% from industrial, 2.5% from commercial, 0.9% from residential, and 0.01% from electric power uses (EIA 2018). Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 4.4.2, below. As such, the CEC anticipates an overall decrease of gasoline demand in the state over the next decade (CEC 2018a).

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and 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 is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer’s average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased corporate average fuel economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and lighting efficiency standards (Sections 301–325)
- Building energy efficiency (Sections 411–441)

The RFS requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2017). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the Energy Policy Act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of greenhouse gas (GHG) emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation’s renewable fuels sector. The updated program (RFS2) includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased 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.
- EISA required the 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.

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

State

Warren–Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974, which created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation’s first energy conservation standards for buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California’s consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state’s energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an “update” that examines the state’s ongoing actions in the context of global climate change.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted Senate Bill (SB) 32, which extended the horizon year of the state’s codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, the California Air Resources Board (CARB) prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state’s GHG emissions reduction planning framework creates co-benefits for energy-related resources.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California’s building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The current Title 24, Part 6 standards, referred to as the 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards use approximately 53% less energy than those under the 2016 standards (CEC 2018b). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018b).

Title 24 also includes Part 11, the California Green Building Standards (CALGreen). CALGreen establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2019 CALGreen standards are the current applicable standards. For nonresidential projects, some of the key mandatory CALGreen 2019 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, and excavated soil and land clearing debris (24 CCR Part 11).

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state’s utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC. The CEC regulations do the following (Perata, Chapter 598, Statutes of 2006):

- Establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities of 1,100 pounds carbon dioxide (CO₂) per megawatt-hour. This encourages the development of power plants that meet California’s growing energy needs while minimizing their emissions of GHGs.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This facilitates public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state’s standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard.

Assembly Bill 1493

Adopted in 2002 by the state legislature, AB 1493 (“Pavley” regulations) required that CARB develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the EPA in March 2008. That decision was based on a finding that California’s request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet “compelling and extraordinary conditions.”

The EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments were part of California’s commitment to a nationwide program to reduce new passenger vehicle GHGs from by 2016. CARB’s September 2009 amendments allowed for California’s enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepared California to harmonize its rules with the federal rules for passenger vehicles. It was expected that the Pavley regulations would reduce GHG emissions from California passenger vehicles by approximately 22% by 2012 and approximately 30% by 2016 while improving fuel efficiency and reducing motorists’ costs.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂-equivalent (CO₂e) grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard was to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation was expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard was expected to drive the availability of plug-in hybrid, battery electric, and fuel-cell

power motor vehicles. The Low Carbon Fuel Standard was anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Senate Bill 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plans (RTPs) that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise an SCS to achieve the GHG reduction target, the metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional metropolitan planning organizations. The targets for the San Joaquin Council of Governments (SJCOG) were a 5% reduction in emissions per capita by 2020 and a 10% reduction by 2035 of the 2005 baseline. Achieving these goals through adoption of an SCS is the responsibility of the metropolitan planning organizations. The SJCOG Board adopted its first RTP/SCS on June 26, 2014. The plan quantified a 24.4% reduction by 2020 and a 23.7% reduction by 2035 below a 2005 baseline (SJCOG 2014). On June 28, 2018, the SJCOG Board adopted the 2018 RTP/SCS, which built on the progress made in the 2014 RTP/SCS (SJCOG 2018).

Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_x) emissions from existing diesel vehicles operating in California. Amendments to this regulation were approved by CARB on April 25, 2014.

The regulation applies to nearly all diesel-fueled, dual-fueled, or alternative-diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. The purpose of this regulation is to reduce emissions of diesel PM, NO_x, and other criteria pollutants from in-use diesel-fueled vehicles.

Heavier trucks and buses with a gross vehicle weight rating greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Starting January 1, 2012, heavier trucks were required to meet a particular engine model year schedule. Fleets that comply with the schedule must install the best available PM filter on 1996 model year and newer engines and replace the vehicle 8 years later. Trucks with 1995 model year and older engines must be replaced starting in 2015. Replacements with a 2010 model year or newer engines meet the final requirements, but owners can also replace with used trucks that have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023, all trucks and buses must have 2010 model year engines, with few exceptions. No reporting is required if complying with this schedule (CARB 2014).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB proposed new emissions standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold in 2011 (CARB 2011). To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025 (EPA and NHTSA 2012). The zero-emissions vehicles (ZEVs) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 through 2025 model years. The Clean Fuels Outlet regulation ensures that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

Executive Order B-16-12

Governor Brown issued Executive Order S-16-12 on March 23, 2012. The executive order requires that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It orders CARB, the CEC, the CPUC, and other relevant agencies work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve the following by 2015:

- The state's major metropolitan areas will be able to accommodate ZEVs, each with infrastructure plans and streamlined permitting
- The state's manufacturing sector will be expanding ZEV and component manufacturing
- The private sector's investment in ZEV infrastructure will be growing
- The state's academic and research institutions will be contributing to ZEV research, innovation, and education

CARB, the CEC, and the CPUC, were also directed to establish benchmarks to help achieve the following goals by 2020:

- The state's ZEV infrastructure will be able to support up to 1 million ZEVs
- The costs of ZEV will be competitive with conventional combustion vehicles
- ZEVs will be accessible to mainstream consumers
- There will be widespread use of ZEVs for public transportation and freight transport
- Transportation sector GHG emissions will be falling as a result of the switch to ZEVs
- Electric vehicle charging will be integrated into the electricity grid
- The private sector's role in the supply chain for ZEV component development and manufacturing will be expanding

Benchmarks were also established to help achieve the following goals by 2025:

- Over 1.5 million ZEVs will be on California roads and their market share will be expanding
- Californians will have easy access to ZEV infrastructure
- The ZEV industry will be a strong and sustainable part of California's economy
- California's clean, efficient vehicles will annually displace at least 1.5 billion gallons of petroleum fuels

On a statewide basis, the executive order establishes a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

Cap-and-Trade Program

To achieve the goals of AB 32, the Climate Change Scoping Plan: A Framework for Change included an early action plan to develop a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system. The cap-and-trade regulation, which is a key element of California’s climate plan, took effect in January 2012, and compliance obligation began in January 2013. The cap-and-trade program sets a statewide limit on sources responsible for 85% of California’s GHG 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 first phase of the cap-and-trade regulation included electricity generated in and imported into California, large combustion sources (i.e., generally those emitting more than 25,000 metric tons [MT] of CO_{2e} per year), and certain industrial sectors. The second phase added providers of transportation fuels and other combustion fuels (e.g., natural gas, propane) to the cap-and-trade program. The regulation requires that emissions generated by these facilities and combustion of fuels be reduced over time under a declining “cap.”

Renewable Energy Sources

SB 1078 established the California Renewables Portfolio Standard (RPS) program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. SB 1078 relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) required all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 set a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% had to come from renewables.

SB 350 (2015) expanded the RPS because it requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. SB 100 requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid, and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS by 2030. Therefore, any project’s reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with CARB and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels, and developed fuel portfolios to meet California’s goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Local**County of San Joaquin General Plan**

The San Joaquin County General Plan Public Health and Safety Element, Natural and Cultural Resources Element, GHG Reductions Goal, and Energy Resources Goal set targets and strategies to reduce GHG emissions and associated climate change by supporting new renewable energy facilities, which would have energy-reducing co-benefits. The relevant San Joaquin County General Plan goals and policies include the following (County of San Joaquin 2016):

Goal PHS-6: To reduce GHG emissions as part of the statewide effort to combat climate change.

Policy PHS-6.2: Community GHG Reduction Targets. The County shall reduce community GHG emissions by 15% below 2005 levels by 2020, and shall strive to reduce GHG emissions by 40% and 80% below reduced 2020 levels by 2035 and 2050, respectively.

Policy PHS-6.3: GHG Reduction Strategies. The County shall promote GHG emission reductions by encouraging efficient farming methods (e.g., no-till farming, crop rotation, cover cropping); supporting the installation of renewable energy technologies; and protecting grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to urban use.

Policy PHS-6.5: Diversion, Recycling, and Reuse. The County shall achieve a 75% diversion of landfill waste based on 1990 levels by 2020, and shall achieve a diversion rate of 90% by 2035.

Policy PHS-6.6: Business-Related GHG Reduction Strategies. The County shall encourage all businesses to help reduce GHG emissions by: replacing high mileage fleet vehicles with more efficient and/or alternative fuel vehicles increasing the energy efficiency of facilities; transitioning toward the use of renewable energy instead of non-renewable energy sources; adopting purchasing practices that promote emissions reductions and reusable materials and increasing recycling.

Policy PHS-6.7: New Development. The County shall require new development to incorporate all feasible mitigation measures to reduce construction and operational GHG emissions.

Policy PHS-6.0: Public Awareness. The County shall support public awareness about climate change and encourage County residents and businesses to become involved in activities and lifestyle changes that will aid in reduction of GHG emissions through alternative energy use, energy and water conservation, waste reduction and recycling, and other sustainable practices.

Goal NCR-5: To increase energy independence through the use of renewable energy sources and improved energy conservation and efficiency.

Policy NCR-5.1: Nonrenewable Energy and Energy Efficiency. The County shall support the efforts of residents, businesses, and energy providers to reduce the consumption of nonrenewable energy and shall promote energy providers' programs to increase energy efficiency and implement demand response programs.

Policy NCR-5.2: Alternative Energy. The County shall support the efforts of residents, businesses, and energy providers to develop and use alternative, renewable energy sources, including but not limited to, biomass, solar, wind, and geothermal.

Policy NCR-5.9: Shaded Parking Lots. The County shall require parking lots to be shaded in the summertime but allow winter solar access to adjacent buildings and sidewalks.

Policy NCR-5.11: Green Building Practices. The County shall encourage green building practices in new construction.

Policy NCR-5.12: Energy Efficient Industry. The County shall support energy efficiency of industrial processes.

Policy NCR-5.13: Solar Heating in Industrial Operations. The County shall encourage industrial operations that require large amounts of hot water to incorporate active solar systems in the design of buildings.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate project impacts to energy are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if a project would:

- A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation.
- B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- C. Result in cumulatively considerable energy impacts.

Methodology

A brief overview of the methodology applied to assess the Project's potential impacts is provided below:

Electricity: The Project's on-site electricity usage data were determined using California Emissions Estimator Model (CalEEMod) Version 2016.3.2. Electricity demand within PG&E's service area was obtained from CPUC reports (specifically, the RPS Program Updates [CPUC 2019]). Electricity would be necessary for multiple purposes, including building heating and cooling, lighting, electronics, electric pump, and electric forklifts.

Natural Gas: The Project on-site natural gas usage data were provided using CalEEMod. Regional natural gas demand data was obtained from CEC reports (specifically, the California Energy Demand Forecast [CEC 2018a]).

CalEEMod Adjustment for Title 24: The current Title 24, Part 6 standards, referred to as the 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020. The current version of CalEEMod assumes compliance with the 2016 Title 24 Building Energy Efficiency Standards (CAPCOA 2017); however, the Project would be required to comply with the 2019 Title 24 Standards. Per the CEC Impact Analysis for the 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, the first-year savings for newly constructed non-residential buildings are 197 gigawatt hours of electricity, 76.6 megawatt of demand, and 0.27 million therms of gas, representing reductions from the 2016 Title 24 standard of 10.7%, 9%, and 1%, respectively (CEC 2018c). To take into account energy reductions associated with compliance with 2019 Title 24, the CalEEMod Title 24 electricity and natural gas values were reduced by 10.7% and 1%, respectively. The applied reductions are anticipated to be conservative because, in general, nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018b).

Petroleum: Potential impacts were assessed through projected traffic trip generation during construction and operation, as provided by the CalEEMod outputs, spreadsheet-based model and emission factors from CARB EMFAC2017 (Appendix B), and the Traffic Impact Analysis that was prepared for the Project (Appendix F). Fuel consumption from construction equipment was estimated by converting the total CO₂ emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton of CO₂ per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton of CO₂ per gallon (The Climate Registry 2020). Heavy-duty construction equipment associated with construction activities and vendor trucks were assumed to use diesel fuel. It was assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles. Fuel consumption from worker and vendor trips was estimated by converting the total CO₂ emissions from the construction phase to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. The fuel consumption resulting from the Project's operational phase would be attributable to vehicles traveling to and from the Project site. Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO₂ emissions from the Project to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Based on the Traffic Impact Analysis prepared for the Project (Appendix F), the Project would generate 1,182 daily trips: 801 trips would be passenger vehicles, light-duty trucks, and motorcycles (68%), and 381 trips would be heavy-duty trucks and medium-heavy-duty trucks (32%) (Appendix F).

4.4.4 Impacts Analysis

Threshold A: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Less-than-Significant Impact. The Project would consume energy resources during construction and operation and would intensify development on the Project site, as discussed below.

Electricity

Construction Energy Usage

Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by PG&E. The electricity used for such activities would be temporary, would be substantially less than that required for Project operation, and would therefore have a negligible contribution to the Project's overall energy consumption.

Operational Energy Usage

The operational phase would require electricity for multiple purposes, including building heating and cooling, lighting, electronics, electric pump, and electric forklifts. CalEEMod was used to estimate Project emissions from electricity uses (see Appendix B for calculations). Default electricity generation rates in CalEEMod were used based on the proposed land use and climate zone and were adjusted to reflect compliance with 2019 Title 24 standards. In addition, the Project proposes use of a private well for water and an on-site septic system for sewage disposal. The Project would operate a 22-kilowatt electric pump to pump water from the private well for water use. Water consumption estimates for both indoor and outdoor water use were estimated using CalEEMod default values. Electricity use for water supply were based on the electric pump rating, pump flowrate, electricity intensity factors from CalEEMod for San Joaquin County, and the indoor and outdoor water use default values in CalEEMod. The Project would operate 65 21-kilowatt indoor forklifts. According to these estimations, the Project would consume approximately 4,011,106 kilowatt-hours per year (Appendix B).

For disclosure, in comparison, approximately 78 billion kilowatt-hours of electricity were used in PG&E's service area in 2019 (CEC 2020a). The energy demand calculations do not take into account all of the Project's energy-saving design features that would result in exceedances of the code requirements. The Project would implement Project Design Features (PDFs), such as PDF-AQ/GHG-1 that involves designing buildings to achieve a minimum of the Leadership in Energy and Environmental Design (LEED) Certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources. The Project would also implement PDF-AQ/GHG-1, which involves installing 2%–3% skylights in warehouse buildings for natural lighting and reducing electricity consumption from warehouse lighting. As such, the Project's electricity use would be more efficient than what is required and would likely be even lower than the calculations presented above.

In summary, although electricity consumption would increase at the Project site due to implementation of the Project, the Project would comply with the applicable energy standards and regulations and would implement energy-efficiency PDFs. Construction electricity usage would be minimal relative to the Project's overall energy consumption. For these reasons, electricity consumption of the Project would not be considered inefficient, wasteful, or unnecessary, and impacts would be less than significant.

Natural Gas

Construction Energy Usage

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

Operational Energy Usage

Default natural gas usage rates in CalEEMod for the proposed land use and climate zone were used and adjusted based on compliance with 2019 Title 24 standards. According to these estimations, the Project would consume approximately 4,509,793 kBtu per year (Appendix B). This amount of natural gas is equivalent to 45,098 therms. For disclosure, in 2019, PG&E delivered approximately 4.9 billion therms to the region (CEC 2020b, 2020c). The Project would implement PDF-AQ/GHG-1, and buildings would be designed to achieve LEED certification and would include energy-efficient heating and cooling equipment, which would minimize the Project's natural gas use.

In summary, although natural gas usage would increase due to implementation of the Project, the Project would comply with the applicable energy standards and regulations, and usage would be decreased through green building standards. For these reasons, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Construction Energy Usage

Heavy-duty construction equipment of various types would be used during each phase of Project construction. The CalEEMod analysis discussed in Section 4.1, Air Quality, and included in Appendix B lists the assumed equipment usage for each phase of construction. Based on that analysis, over all phases of construction, diesel-fueled construction equipment would run for an estimated 14,388 hours, as summarized in Table 4.4-1.

Table 4.4-1. Hours of Operation for Construction Equipment

Construction Phase	Hours of Equipment Use
Site Preparation	616
Grading	2,112
Architectural Coating	384
Paving	1,008
Building Construction	10,268
Total	14,388

Source: Appendix B.

The estimated diesel fuel use from construction equipment is shown in Table 4.4-2, Construction Equipment Diesel Demand.

Table 4.4-2. Construction Equipment Diesel Demand

Phase	Pieces of Equipment ^a	Equipment CO ₂ (MT) ^a	Kilograms of CO ₂ per Gallon ^b	Gallons
Site Preparation	7	18.39	10.21	1,801.14
Grading	8	89.92	10.21	8,806.72
Architectural Coating	1	8.17	10.21	800.24
Paving	6	21.03	10.21	2,059.64
Building Construction	9	174.91	10.21	17,131.61
			Total	30,599.33

Sources:

^a Appendix B

^b The Climate Registry 2020.

Notes: CO₂ = carbon dioxide; MT = metric ton

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 4.4-3, Construction Worker Vehicle Gasoline Demand, and Table 4.4-4, Construction Vendor Truck Diesel Demand.

Table 4.4-3. Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	Kilograms of CO ₂ per Gallon ^b	Gallons
Site Preparation	198	1.04	8.78	117.98
Grading	660	3.45	8.78	393.26
Architectural Coating	1,920	9.69	8.78	1,103.33
Paving	336	1.70	8.78	193.09
Building Construction	15,100	77.82	8.78	8,863.78
Total				10,671.44

Sources:^a Appendix B^b The Climate Registry 2020.**Notes:** CO₂ = carbon dioxide; MT = metric ton**Table 4.4-4. Construction Vendor Truck Diesel Demand**

Phase	Trips	Vehicle CO ₂ (MT) ^a	Kilograms of CO ₂ per Gallon ^b	Gallons
Site Preparation	66	0.81	10.21	79.68
Grading	198	2.44	10.21	239.03
Architectural Coating	512	6.25	10.21	612.31
Paving	84	1.03	10.21	100.39
Building Construction	3,020	37.08	10.21	3,631.56
Total				4,662.97

Sources:^a Appendix B^b The Climate Registry 2020.**Notes:** CO₂ = carbon dioxide; MT = metric ton

As shown in Tables 4.4-2 through 4.4-4, the Project is estimated to consume 45,934 gallons of petroleum during the construction phase. For disclosure, by comparison, approximately 28.7 billion gallons of petroleum are consumed in California annually (EIA 2020d). Also, for disclosure, countywide total petroleum use by vehicles is expected to be 370 million gallons per year in 2022 (CARB 2020). The Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, which would minimize fuel consumption. Although construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. Further, the petroleum consumed related to Project construction would be typical of construction projects of similar types and sizes and would not necessitate new petroleum resources beyond what are typically consumed in California. Therefore, because petroleum use during construction would be temporary and relatively minimal, and would not be wasteful or inefficient, impacts would be less than significant.

Operational Energy Usage

During operations, the majority of fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site, off-road equipment (yard trucks and forklifts), and the emergency fire pump testing and maintenance.

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the vehicle miles traveled (VMT) as a result of Project operation. The annual VMT attributable to the Project is expected to be 9,856,559 VMT (Appendix B). The Project would consume an estimated 137,803 gallons of gasoline per year and 749,005 gallons of diesel per year from operation of vehicle trips traveling to and from the Project site. The total petroleum consumption from motor vehicles, off-road equipment, and the emergency fire pump testing and maintenance would be 1,012,156 gallons per year. For disclosure, by comparison, approximately 28.7 billion gallons of petroleum are consumed in California annually (EIA 2020d).

Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the Project is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. As discussed under Section 4.4.2, there are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted a new approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and ZEVs in California (CARB 2017). The Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, which would minimize fuel consumption. Additionally, in response to SB 375, CARB adopted the targets for SJCOG of a 5% reduction in emissions per capita by 2020 and a 10% reduction by 2035 below a 2005 baseline. The RTP/SCS serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements (SJCOG 2014). As such, operation of the Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

The Project would implement PDFs to encourage electric trucks, electric vehicles, and clean air/electric vehicle/vanpools. Furthermore, the Project would provide a regional hub for goods movement, connecting with the arterial goods distribution system.

The Project's impacts in the category of air quality emissions was determined to be potentially significant, and the Project would be required to implement Mitigation Measure (MM-)AQ-1 through MM-AQ-3, as detailed in Section 4.1, Air Quality, of this Environmental Impact Report, including implementing a Transportation Demand Management Program to facilitate opportunities for bicycling and pedestrian travel, as well as ride-sharing and carpooling to reduce VMT. Furthermore, MM-AQ-3 would require operation of electric or other zero-emissions technology forklifts and Tier 4 interim standards or better yard truck. Reducing air quality emissions during operation would help reduce construction-related fuel usage.

In summary, although Project implementation would result in an increase in petroleum use during construction and operation, over time vehicles would use less petroleum due to advances in fuel economy. Additionally, the Project would include a variety of features that would encourage electric and zero-emissions technology, ride-sharing and carpooling, and reduced vehicle miles traveling to and from the site during operation. In addition, the Project would provide a regional hub for goods movement in the region. Given these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Threshold B: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-Than-Significant Impact. The Project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR, Part 6). Part 6 of Title 24 establishes energy efficiency standards for non-residential buildings constructed in California in order to reduce energy demand and consumption.

Successful implementation of the SJCOG 2018 RTP/SCS would result in GHG emission reductions, reducing potential impact on the environment, facilitating efficient public investments, maximizing mobility and accessibility, supporting economic vitality, improving public health, and building on active transportation. The Project would be consistent with the policies and supportive strategies within the SJCOG 2018 RTP/SCS by implementing PDFs. Per PDF-AQ/GHG-1, the Project buildings would be designed to achieve a minimum of the LEED certification goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources. Per PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting to reduce electricity consumption from warehouse lighting. Per PDF-AQ/GHG-3, the Project would install conduit for future electric truck charging capabilities. Per PDF-AQ/GHG-4, the Project would install conduit for 33 future electric vehicle charging spaces. Per PDF-AQ/GHG-5, the Project would designate 21 parking spaces for clean air/electric vehicle/vanpool parking. Furthermore, the Project would implement MM-AQ-1 through MM-AQ-3 to facilitate opportunities for bicycling and pedestrian travel, ride-sharing, and carpooling; encouraging electric, zero-emission technology, ride-sharing, and carpooling; and reducing VMT to and from the site during operation. The Project would also provide a hub for goods movement throughout the region.

Because the Project would comply with the applicable energy standards and regulations, the Project would result in a less-than-significant impact associated with the potential to conflict with energy standards and regulations.

Threshold C: Would the Project result in a cumulatively considerable energy impact?

Less-Than-Significant Impact. The geographic area considered for the analysis of cumulative energy impacts is San Joaquin County. Potential cumulative impacts on energy would result if the Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. Significant energy impacts could result from development that would not incorporate sufficient building energy efficiency features or would not achieve building energy efficiency standards, or if projects result in the unnecessary use of energy during construction or operation.

As discussed in Threshold B and Threshold C, above, the Project would not result in wasteful, inefficient, or unnecessary use of energy during construction or operations, nor would it conflict with an applicable plan. Cumulative projects within San Joaquin County would have a construction period during which electricity, natural gas, and petroleum would be used; however, it is expected that such usage would be temporary and would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Additionally, although some of the cumulative projects within San Joaquin County could result in increases in energy consumption during their operation, the increased demand is anticipated to be minimal relative to statewide energy usage and, in combination with the Project, would not contribute to any potentially significant cumulative energy impacts. Furthermore, any commercial and residential cumulative projects that may take place in San Joaquin County that include long-term energy demand would be subject to CALGreen, which provides energy efficiency standards. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, as applicable, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set forth in the AB 32 Scoping Plan, which seek to make all newly constructed residential homes produce a sustainable amount of renewable energy through the use of on-site photovoltaic solar systems. 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 of cumulative projects.

For the reasons above, the Project, together with the cumulative projects, would not result in wasteful, inefficient, or unnecessary use of energy, or conflict with applicable plans. Therefore, the Project, in combination with past, present, and reasonably foreseeable future development, would not result in a significant cumulative impact related to energy, and the impact would be less than significant.

4.4.5 Mitigation Measures

No mitigation measures are required.

4.4.6 Level of Significance After Mitigation

Threshold A: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

The Project would have a **less-than-significant impact** with regard to the wasteful, inefficient, or unnecessary consumption of energy resources during Project construction and operation. No mitigation is required.

Threshold B: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be **less than significant**. No mitigation is required.

Threshold C: Would the Project result in a cumulatively considerable energy impact?

The Project would have a **less-than-significant impact** with regards to cumulative energy impacts. No mitigation is required.

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4.5 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared by Dudek in January 2021 (Appendix B)
- Traffic Impact Analysis prepared by Advanced Mobility Group in December 2020 (Appendix F)

4.5.1 Existing Conditions

Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (i.e., decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise (EPA 2017a).

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (IPCC 2013; EPA 2017a). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013).

Greenhouse Gas

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state’s primary GHG emissions reduction programs, GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃) (see also California Environmental Quality Act [CEQA] Guidelines, Section 15364.5). Some GHGs, such as CO₂, CH₄, and N₂O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO₂, include fluorinated gases, such as HFCs, PFCs, and SF₆, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.¹

Carbon Dioxide. CO₂ is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth’s radiative balance. Natural sources of CO₂ include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO₂ are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH₄ is produced through both natural and human activities. CH₄ is a flammable gas and is the main component of natural gas. CH₄ is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N₂O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N₂O. Sources of N₂O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N₂O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to ozone-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Because PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

¹ The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB’s “Glossary of Terms Used in GHG Inventories” (2021), and EPA’s “Glossary of Climate Change Terms” (2016).

- **Sulfur Hexafluoride:** SF₆ is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF₆ is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF₃ is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere), and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric ozone (O₃).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is short-lived and varies spatially, which makes it difficult to quantify its global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O₃, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O₃, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O₂), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O₃, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA

2016). The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO₂ equivalent (CO₂e).

The current version of the California Emissions Estimator Model (CalEEMod) (version 2016.3.2) assumes that the GWP for CH₄ is 25 (so emissions of 1 MT of CH₄ are equivalent to emissions of 25 MT of CO₂), and the GWP for N₂O is 298, based on the Intergovernmental Panel on Climate Change’s Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 million metric tons (MMT) of CO₂e, excluding land use change and forestry (PBL 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO₂e (PBL 2018).

Per the U.S. Environmental Protection Agency (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 (EPA 2020), total United States GHG emissions were approximately 6,676.6 MMT CO₂e in 2018 (EPA 2020). The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 81.3% of total GHG emissions (5,428.1 MMT CO₂e). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO₂ emissions in 2018 (5,031.8 MMT CO₂e). Relative to 1990, gross United States GHG emissions in 2018 were higher by 3.7%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188.4 MMT CO₂e) and overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

According to California’s 2000–2018 GHG emissions inventory (2020 edition), California emitted 425 MMT CO₂e in 2018, including emissions resulting from out-of-state electrical generation (CARB 2020). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high-GWP substances, and recycling and waste. The California GHG emissions source categories and their relative contributions in 2018 are presented in Table 4.5-1.

Table 4.5-1. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO ₂ e)	Percent of Total
Transportation	169.50	40%
Industrial uses	89.18	21%
Electricity generation ^a	63.11	15%
Residential and commercial uses	41.37	10%
Agriculture	32.57	8%
High GWP substances	20.46	5%
Recycling and waste	9.09	2%
Totals	425.28	100%

Source: CARB 2020.

Notes: GHG = greenhouse gas; GWP = global warming potential; MMT CO₂e = million metric tons of carbon dioxide equivalent. Emissions reflect 2018 California GHG inventory.

Totals may not sum due to rounding.

^a Includes emissions associated with imported electricity, which account for 24.57 MMT CO₂e.

As outlined in Table 4.5-2, the County of San Joaquin’s Greenhouse Gas Emissions by Sectors (2007), the County of San Joaquin (County) emitted 3,051,996 MT CO_{2e} in 2007 (County of San Joaquin 2014).

Table 4.5-2. County of San Joaquin Greenhouse Gas Emissions by Sectors (2007)

Source Category	Annual GHG Emissions (MT CO _{2e})
Electricity	831,532
Transportation	1,350,924
Waste	41,067
Wastewater	2,784
Agriculture	825,689
Total	3,051,996

Source: County of San Joaquin 2014.

Notes: GHG = greenhouse gas; MT CO_{2e} = metric tons of carbon dioxide equivalent.

Reflects inventory year 2007.

Total may not add due to rounding.

Potential Effects of Climate Change

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state’s climate have been observed, including an increase in annual average air temperature, with record warmth from 2012 to 2016; more frequent extreme heat events; more extreme drought; a decline in winter chill; an increase in cooling degree days and a decrease in heating degree days; and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California’s physical systems—the ocean, lakes, rivers, and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state’s annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health, as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California, as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (CNRA 2006, 2009b, 2012, and 2018a), which have addressed acceleration of warming across the state; more intense and frequent heat waves; greater riverine flows; accelerating sea-level rise; more intense and frequent drought; more severe and frequent wildfires; more severe storms and extreme weather events; shrinking snowpack and less overall precipitation; and ocean acidification, hypoxia, and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment (CNRA 2018a) includes reports for nine regions of the state, including the San Joaquin region, where the Project is located. Key projected climate changes for the San Joaquin region include the following (CNRA 2018b):

- Agriculture is one of the most vulnerable sectors under climate change due in part to more frequent and severe drought, as well as tighter water supply.
- Ecosystems in San Joaquin Valley are highly vulnerable to climate change given existing anthropogenic stressors and the lack of organization of landscape-scale science, funding, and mitigation of adverse impacts within the region.
- Water resources within the San Joaquin Valley region will be severely impacted by climate change.
- Infrastructure in San Joaquin Valley, including urban, water, and transportation systems, may face increased stress from higher temperatures and extreme precipitation events, including droughts and floods.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought to destructive storm events; significant shifts in water availability and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests, and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; and threshold effects (i.e., a change in the ecosystem that results in a “tipping point” beyond which irreversible damage or loss has occurred).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea-level rise.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities, and combined with increasing temperatures, have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea-level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems, in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea-level rise, in addition to more frequent and severe coastal storms and erosion, is threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities, as well as negatively impacting coastal recreational assets such as beaches and tidal wetlands.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness, such as asthma and allergies.

Transportation. Although the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter. Increased risk of flooding has a variety of public health concerns, including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively groundwater reserves and result in increased overdraft and subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Massachusetts v. EPA.

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel by 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling previously discussed, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, 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 CO₂ by model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

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 (76 FR 57106–57513). 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 6%–23% 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 applies to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower 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 (EPA and NHTSA 2016).

In August 2018, the EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by approximately 0.5 million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1 degree Celsius by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the EPA and NHTSA published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program” (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA and NHTSA issued Part Two of the SAFE Rule, which went into effect 60 days after being published in the Federal Register. The Part Two Rule sets CO₂ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. This issue is evolving as California and 22 other states, as well as the District of Columbia and four cities, filed suit against the EPA and a petition for reconsideration of the rule on November 26, 2019.

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO₂ emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: fossil-fuel-fired electric utility steam-generating units, and stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO₂ emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05. EO S-3-05 (June 2005) established California’s GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California EPA to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2006, 2010).

Assembly Bill 32. In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California’s GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state’s long-range climate objectives.

Senate Bill 32 and AB 197. Senate Bill (SB) 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state’s climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

CARB’s 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code Section 38550, CARB approved a statewide limit on the GHG emissions level by 2020, consistent with the determined 1990 baseline (427 MMT CO₂e).

CARB’s Climate Change Scoping Plan. One specific requirement of AB 32 is for CARB to prepare a “Scoping Plan” for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first Scoping Plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state’s long-range climate objectives. The key elements of the Scoping Plan included the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California’s GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. 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 (17 CCR Section 95480 et seq.).
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of California’s long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020 (CARB 2008). Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions levels using more recent GWPs identified by the Intergovernmental Panel on Climate Change, from 427 MMT CO_{2e} to 431 MMT CO_{2e} (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB's Governing Board adopted the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update while identifying new, technologically feasible, and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_{2e} per capita by 2030 and no more than 2 MT CO_{2e} per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Under 2 Memorandum of Understanding (Under 2 2016) and the Paris Agreement, which are developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through Climate Action Plans [CAPs]) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project-level review where there is a legally adequate CAP.

The 2030 Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the Eos, and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent if it will further the objectives and not obstruct their attainment.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that the EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (40 CFR Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that the EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit more than 10,000 MT CO_{2e} per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emissions levels. Entities that emit more than the 25,000 MT CO_{2e} per year threshold are required to have their GHG emissions report verified by a CARB-accredited third party.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of MMT CO_{2e}. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

SB 605 and SB 1383. SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) required CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for methane and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (Reduction Strategy) in March 2017. The Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These

energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code [PRC] Section 25402[b][1]). The regulations receive input from members of industry and the public, with the goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402[b][2] and [b][3]). As a result, these standards help to save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 24, Part 11. In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings and schools and hospitals. The CALGreen 2019 standards, which are the current standards, became effective January 1, 2020. For nonresidential projects, some of the key mandatory CALGreen 2019 standards include the following (24 CCR Part 11):

- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles, as shown in Table 5.106.5.2 of the CALGreen Code (5.106.5.2).
- Electric vehicle (EV) charging stations. Construction shall comply with Section 5.106.5.3.1 (single charging space requirements) or Section 106.5.3.2 (multiple charging space requirements) to facilitate future installation of electric vehicle supply equipment (EVSE). The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. Table 5.106.5.3.3 of the CALGreen Code shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE (5.106.5.3).²
- Shade trees. Shade trees shall be planted to comply with Sections 5.106.12.1 (surface parking areas), 5.106.12.2 (landscape areas), and 5.106.12.3 (hardscape areas). Percentages shown shall be measured

² Table 5.106.5.3.3 of the CALGreen code establishes a range of electric vehicle (EV) charging space requirements based on the total number of parking places of a project. At the minimum, no EV charging spaces are required if the project has a total of 0 to 9 parking spaces. At the maximum, 6% of the total parking spaces are required to be EV charging spaces for projects with a total number of actual parking spaces of 201 or more.

at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6. (5.106.12).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi [pounds per square inch] (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi] (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle/20 [rim space (inches) at 60 psi] (5.303.3.4.5).
- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWEL0), whichever is more stringent (5.304.1).
- Recycled water supply systems. Recycled water supply systems shall be installed in accordance with Sections 5.305.1.1 (outdoor recycled water supply systems), 5.305.1.2 (technical requirements for outdoor recycled water supply systems), and the California Plumbing Code (5.305.1).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1 (construction waste management plan), 5.405.1.2 (waste management company), or 5.408.1.3 (waste stream reduction alternative); or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Outdoor Air Quality. Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Section 5.508.1.1 (no CFCs) and Section 5.508.1.2 (no halons).

The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of local agencies and applicants. The California Public Utilities Commission (CPUC), CEC, and CARB also have a shared, established goal of achieving zero net energy performance for new construction in California. The key policy timelines include all new residential construction in California needed to be zero net energy by 2020, and all new commercial construction in California will be zero net energy by 2030.³

³ For example, per California's Zero Net Energy Policies and Initiatives, it is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards (CPUC 2013).

Title 20. CCR Title 20 requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer’s demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Senate Bill 1. SB 1 (Murray) (August 2006) established a \$3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for homes and businesses within 10 years of adoption and placing solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed “Go Solar California,” was previously titled “Million Solar Roofs.”

California AB 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. AB 1470 required the CEC to evaluate the data available and to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewables generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and EO S-21-09).

SB 1368. SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

EO S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. EO S-14-08 required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The CNRA, through collaboration with the CEC and California Department of Fish and Wildlife, was directed to lead this effort.

EO S-21-09 and SBX1-2. EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the CPUC and CEC to ensure that the regulation builds on the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health, and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1 2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. SB X1-2 applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

SB 350. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350, establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

AB 1493. AB 1493 (Pavley July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO₂ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. The first phase (2009–2012) standards were estimated to result in a reduction of approximately 22% of GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards were estimated to result in a reduction of approximately 30%.

Heavy Duty Diesel. CARB adopted the final Heavy Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce PM and NO_x emissions from heavy-duty diesel vehicles. The rule required PM filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure on December 12, 2013, to limit idling of diesel-fueled commercial vehicles. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

EO S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_{2e} grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard was to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). Carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered.

SB 375. SB 375 (Steinberg September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every 8 years. SB 375 requires the state's 18 regional Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a MPO is unable to devise an SCS to achieve the GHG reduction target, the MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional MPOs. The targets for the San Joaquin Council of Governments (SJCOG) are a 5% reduction in emissions per capita by 2020 and a 10% reduction by 2035 below a 2005 baseline. Achieving these goals through adoption of an SCS is the responsibility of the MPOs. The SJCOG Board adopted its first RTP/SCS on June 26, 2014. The plan quantified a 24.4% reduction by 2020 and a 23.7% reduction by 2035 below a 2005 baseline (SJCOG 2014). On June 28, 2018, the SJCOG Board adopted the 2018 RTP/SCS, which builds on the progress made in the 2014 RTP/SCS (SJCOG 2018).

Advanced Clean Cars Program and Zero-Emissions Vehicle Program. The Advanced Clean Cars program (January 2012) is a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single, coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB implemented new emissions standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% by 2025. The Zero-Emissions Vehicle (ZEV) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (EVs) for the 2018 to 2025 model years.

EO B-16-12. EO B-16-12 (March 2012) required that state entities under the governor’s direction and control support and facilitate the rapid commercialization of ZEVs. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

AB 1236. AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of EV charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based on substantial evidence in the record that the proposed installation would have a specific, adverse impact on the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. AB 1236 provided that implementation of consistent statewide standards to achieve the timely and cost-effective installation of EV charging stations is a matter of statewide concern, and required EV charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for EV charging stations. AB 1236 also required a city, county, or city and county with a population of fewer than 200,000 residents to adopt this ordinance by September 30, 2017.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Solid Waste

AB 939, AB 341, and AB 1826. In 1989, AB 939, known as the Integrated Waste Management Act (PRC Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state’s policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015, published a discussion document titled AB 341 Report to the Legislature, which identified five priority strategies that CalRecycle believed would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2012).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Other State Actions

Senate Bill 97. SB 97 (Dutton August 2007) directed the Governor’s Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor’s Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project’s GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through implementation of project features or off-site measures. The adopted amendments do not establish a GHG emissions threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project’s GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should “make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a “model or methodology” to quantify the emissions, or by relying on “qualitative analysis or other performance based standards” (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (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 GHG emissions (14 CCR 15064.4[b]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California’s response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009a), and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014 (CNRA 2014). To assess the state’s vulnerability, the report summarizes key climate change impacts to the state for

agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018c).

Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) does not regulate GHG emissions directly through its permitting responsibilities for stationary sources. Thus, there are no SJVAPCD rules or regulations related to GHGs. The SJVAPCD, however, influences reductions of GHGs from new and modified stationary sources when acting as a lead agency for CEQA. The SJVAPCD implements its GHG policies and reviews whether new or modified stationary sources will implement best performance standards (BPSs).

In 2009, the SJVAPCD developed an internal policy and guidance for local land use agencies to use in evaluating GHG impacts under CEQA. In the Final Staff Report – Addressing GHG Emissions Impacts under the California Environmental Quality Act (SJVAPCD 2009a), the SJVAPCD reviewed potential GHG significance thresholds and approaches suggested by or adopted by entities, including a zero threshold, quantification of a project's GHG impacts without a recommended significance threshold, and specific significance thresholds for different kinds of projects (e.g., residential, mixed use, industrial, plans).⁴ The following discussion summarizes the SJVAPCD's conclusions about various categories of GHG significance thresholds.

Zero Threshold. The SJVAPCD concluded that “although a zero threshold is appealing in its simplicity; execution of a zero threshold would be difficult or impossible” (SJVAPCD 2009a). Furthermore, the SJVAPCD found that projects that could not reduce their emissions to zero would require preparation of an environmental impact report and adoption of a statement of overriding consideration by the lead agency. Potentially, projects could choose to relocate to a region with a less-stringent threshold, so-called “leakage,” which would still result in GHG emissions outside the SJVAPCD. Finally, the SJVAPCD noted that CARB concluded that zero thresholds are not mandated because some level of GHG emissions is still consistent with climate stabilization, and other regulatory programs will result in GHG reductions. For these reasons, the SJVAPCD did not support a zero threshold. Accordingly, a zero threshold was not selected as an appropriate GHG/climate change threshold for this assessment.

Non-Zero Quantitative Thresholds. The SJVAPCD reviewed numerous quantitative thresholds adopted or proposed by other air districts and organizations, including “mass of GHG emissions generate per unit of activity, GHG emissions per capita per unit basis, and percent reduction compared to business-as-usual” (SJVAPCD 2009a). Although a tiered approach was evaluated, with the final tier incorporating a quantitative threshold, the SJVAPCD concluded that “without supporting scientific information, establishment of tier trigger levels could be argued to be arbitrary, and District staff does not believe the available science supports establishing a bright-line threshold, above which emissions are significant and below which they are not” (SJVAPCD 2009a).

⁴ These documents encompassed the primary approaches for establishing significance thresholds prior to the March 18, 2010, effective date of revisions of the CEQA Guidelines in accordance with SB 97. Additional guidance regarding assessment of GHG impacts were provided in the revised CEQA Guidelines and accompanying Final Statement of Reasons for Regulatory Action – Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (CNRA 2009a). In addition, the California appellate courts and Supreme Court have more recently considered CEQA cases and, in some cases, issued published decisions that provide additional direction regarding the appropriateness of certain GHG assessment methodologies and significance thresholds.

Best Performance Standards. The SJVAPCD evaluated performance-based standards that would state “in quantifiable terms the level and extent of the attribute necessary to reach a goal or objective” (SJVAPCD 2009a). The SJVAPCD considered a project achieving the performance-based standard or mitigating GHG emissions to an equivalent emissions reduction level would be considered to have a less-than-significant cumulative impact on climate change. In conclusion, the SJVAPCD found that the state’s GHG emissions reduction target would be accomplished by achieving a 29% reduction from business-as-usual (BAU), and that achieving this reduction would be a “de facto” performance-based standard for GHG emissions reductions.

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 (SJVAPCD 2009b). The guidance recommends the following hierarchy for evaluating a project’s impact with respect to its GHG emissions:

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program that avoids or substantially reduces GHG emissions within the geographic area in which the Project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing BPSs would not require quantification of project-specific GHG emissions.⁵ Consistent with the CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPSs would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29% compared to BAU, including GHG emission reductions achieved since the 2002–2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHG (SJVAPCD 2009b).
- For development projects, BPSs would include project design elements, land use decisions, and technologies that reduce GHG emissions. Although the SJVAPCD has adopted BPSs for several types of stationary sources (e.g., boilers), it has not developed BPSs for land development projects. Projects implementing any combination of BPSs and/or demonstrating a total 29% reduction in GHG emissions from BAU would be determined to have a less-than-significant individual and cumulative impact on global climate change (SJVAPCD 2015).

County of San Joaquin

The County’s General Plan Public Health and Safety Element GHG reductions goals, and Natural and Cultural Resources Element energy resources goals set targets and strategies to reduce GHG emissions and associated climate change by supporting new renewable energy facilities. These are as follows (County of San Joaquin 2016):

Goal PHS-6: To reduce GHG emissions as part of the statewide effort to combat climate change.

Policy PHS-6.2: Community GHG Reduction Targets. The County shall reduce community GHG emissions by 15% below 2005 levels by 2020, and shall strive to reduce GHG emissions by 40% and 80% below reduced 2020 levels by 2035 and 2050, respectively.

⁵ The guidance recommends, “projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions” (SJVAPCD 2009c). This assessment for the project does include quantification of the project’s construction and operational GHG emissions.

Policy PHS-6.3: GHG Reduction Strategies. The County shall promote GHG emission reductions by encouraging efficient farming methods (e.g., no-till farming, crop rotation, cover cropping); supporting the installation of renewable energy technologies; and protecting grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to urban use.

Policy PHS-6.5: Diversion, Recycling, and Reuse. The County shall achieve a 75% diversion of landfill waste based on 1990 levels by 2020, and shall achieve a diversion rate of 90% by 2035.

Policy PHS-6.6: Business-Related GHG Reduction Strategies. The County shall encourage all businesses to help reduce GHG emissions by: replacing high mileage fleet vehicles with more efficient and/or alternative fuel vehicles increasing the energy efficiency of facilities; transitioning toward the use of renewable energy instead of non-renewable energy sources; adopting purchasing practices that promote emissions reductions and reusable materials and increasing recycling.

Policy PHS-6.7: New Development. The County shall require new development to incorporate all feasible mitigation measures to reduce construction and operational GHG emissions.

Policy PHS-6.0: Public Awareness. The County shall support public awareness about climate change and encourage County residents and businesses to become involved in activities and lifestyle changes that will aid in reduction of GHG emissions through alternative energy use, energy and water conservation, waste reduction and recycling, and other sustainable practices.

Goal NCR-5: To increase energy independence through the use of renewable energy sources and improved energy conservation and efficiency.

Policy NCR-5.1: Nonrenewable Energy and Energy Efficiency. The County shall support the efforts of residents, businesses, and energy providers to reduce the consumption of nonrenewable energy and shall promote energy providers' programs to increase energy efficiency and implement demand response programs.

Policy NCR-5.2: Alternative Energy. The County shall support the efforts of residents, businesses, and energy providers to develop and use alternative, renewable energy sources, including but not limited to, biomass, solar, wind, and geothermal.

Policy NCR-5.9: Shaded Parking Lots. The County shall require parking lots to be shaded in the summertime but allow winter solar access to adjacent buildings and sidewalks.

Policy NCR-5.11: Green Building Practices. The County shall encourage green building practices in new construction.

Policy NCR-5.12: Energy Efficient Industry. The County shall support energy efficiency of industrial processes.

Policy NCR-5.13: Solar Heating in Industrial Operations. The County shall encourage industrial operations that require large amounts of hot water to incorporate active solar systems in the design of buildings.

4.5.3 Thresholds of Significance

The significance criteria used to evaluate a project's impacts to GHG and climate change are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to GHG emissions would occur if a project would:

- A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
- C. Result in cumulatively considerable impacts with regard to greenhouse gas emissions.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, although GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project level under CEQA.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009a). The State of California has not adopted emissions-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled "Discussion Draft CEQA and Climate Change Advisory," states the following (OPR 2018):

Neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2018). Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

Notwithstanding the CEQA Guidelines, local land use agencies sought additional technical assistance from expert air quality agencies in how to complete the suggested quantitative analysis of the significance of GHG emissions for land use projects being considered under CEQA. The SJVAPCD adopted Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009b). The guidance relies on either BPS or 29% reduction compared to BAU to assess the significance of project-specific GHG emissions on global climate change during the environmental review process. Notably, the Project would not be considered a stationary project with applicable BPSs. Regarding the BAU threshold, the Supreme Court in its 2015 decision, *Center for Biological Diversity v. Department of Fish and Wildlife*, S217763 (*Newhall*), concluded that substantial evidence is required to support the application of AB 32 statewide GHG reduction goal of 29% to new land use projects. Since neither the BPS nor BAU approach is generally appropriate for this Project, the SJVAPCD guidance was not used for this analysis. However, the SJVAPCD guidance does not limit a lead agency’s authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change.

In absence of any applicable numeric threshold, this analysis assesses compliance with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the SJCOG 2018 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state’s long-term climate goals. This analysis also considers consistency with regulations and requirements adopted pursuant to the Scoping Plan and the County’s General Plan. GHG emissions from Project construction and operation are included for disclosure, consistent with the Governor’s Office of Planning and Research recommendations and industry practice.

Approach and Methodology

Project Design Features

The following project design features (PDFs) would be included as part of the Project:

PDF-AQ/GHG-1 The buildings shall be designed to achieve a minimum the Leadership in Energy and Environmental Design (LEED) Certified goal identified by the LEED Green Building Rating System to conserve resources, including but not limited to energy and renewable resources.

PDF-AQ/GHG-2 Install 2%–3% skylights in warehouse buildings for natural lighting and reduce electricity consumption from warehouse lighting.

PDF-AQ/GHG-3 Install conduit for future electric truck charging capabilities.

PDF-AQ/GHG-4 Install conduit for 33 future electric vehicle charging spaces.

PDF-AQ/GHG-5 Designate 21 parking spaces for clean air/electric vehicle/vanpool parking.

Construction

CalEEMod Version 2016.3.2 was used to estimate potential Project-generated GHG emissions during construction. Construction of the Project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.1.3 in Section 4.1, Air Quality, are also applicable for the estimation of construction related GHG emissions. As such, see Section 4.1.3 for a discussion of construction emissions calculation methodology and assumptions.

Operation

Emissions from the operational phase of the Project were estimated using CalEEMod Version 2016.3.2. Operational year 2022 was assumed consistent with completion of Project construction. Although emission reductions are not quantified, the Project would incorporate the PDFs summarized above.

CalEEMod Version 2016.3.2 was used to estimate potential Project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (natural gas and electricity), solid waste, water supply and wastewater treatment, off-road equipment, and stationary sources (fire pump). Mobile source emissions were estimated using a spreadsheet model based on CARB EMFAC2017 emission factors. Emissions from each category are discussed in the following text with respect to the Project. For additional details, see Section 4.1.3 for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy (natural gas), and mobile sources.

Area Sources

CalEEMod was used to estimate GHG emissions from the Project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 4.1.3 for a discussion of landscaping equipment emissions calculations.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the Project's land use. The current version of CalEEMod assumes compliance with the 2016 Title 24 Building Energy Efficiency Standards (CAPCOA 2017); however, the Project would be required to comply with the 2019 Title 24 Standards, at a minimum. Per CEC's Impact Analysis for the 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, the first-year savings for newly constructed nonresidential buildings are 197 gigawatt hours of electricity, 76.6 megawatt of demand, and 0.27 million therms of gas, representing reductions from the 2016 Title 24 standard of 10.7%, 9%, and 1%, respectively (CEC 2018).

CalEEMod default energy intensity factors (CO₂, CH₄, and N₂O mass emissions per kilowatt-hour) for Pacific Gas & Electric (PG&E) is based on the value for PG&E's energy mix in 2008. SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020, and SB 100 calls for further development of renewable energy, with a target of 60% by 2030. The CO₂ emissions intensity factor for utility energy use in 2022 (first full year of Project operations) in CalEEMod was adjusted to reflect PG&E's 2018 reported factor, which assumes 29.7% of the power mix consists of eligible renewables (PG&E 2020).

Mobile Sources

All details for criteria air pollutants discussed in Section 4.1.3 are also applicable for the estimation of operational mobile source GHG emissions. Mobile sources for the Project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty trucks⁶) traveling to and from the Project site. Emissions from the mobile sources during operation of the Project were estimated using a spreadsheet-based model and emission factors from CARB's EMFAC2017.

⁶ "Heavy-duty trucks" include medium-heavy-duty trucks (three-axle) and heavy-heavy-duty trucks (four-plus-axle).

Solid Waste

The Project would generate solid waste, and therefore, result in CO₂e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Water and Wastewater

The Project proposes utilization of a private well for water and an on-site septic system for sewage disposal. The Project would operate a 22-kilowatt electric pump to pump water from the private well for water use. Water consumption estimates for indoor and outdoor water use were estimated using CalEEMod default values. Electricity use for water supply were based on the electric pump rating, pump flowrate, electricity intensity factors from CalEEMod for the County, and the indoor and outdoor water use default values in CalEEMod.

Off-Road Equipment

All details for criteria air pollutants discussed in Section 4.1.3 are also applicable for the estimation of operational off-road sources of GHG emissions and the estimation of operational GHG emissions from the fire pump.

4.5.4 Impacts Analysis

Threshold A: *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Threshold B: *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 Impact. The Project would generate an increase in GHGs associated with construction activities and operation, as discussed below.

Construction Emissions

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 4.5.3, Thresholds of Significance. Construction of the Project is anticipated to commence in July 2021 and would last approximately 10 months, ending in April 2022. On-site sources of GHG emissions would include off-road equipment and off-site sources such as vendor trucks and worker vehicles. Table 4.5-3 presents construction emissions for the Project in 2021 and 2022 from on-site and off-site emission sources.

Table 4.5-3. Estimated Annual Construction Greenhouse Gas Emissions – Unmitigated

Year	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons per Year			
2021	285.70	0.06	0.00	287.26
2022	168.02	0.03	0.00	168.70
Total				455.96

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.

See Appendix B for complete results.
 The values shown are the annual emissions reflect California Emissions Estimator Model “mitigated” output.
 Totals may not add due to rounding.
Source: Appendix B.

As shown in Table 4.5-3, the estimated total GHG emissions during construction would be approximately 456 MT CO₂e over the construction period. Estimated Project-generated construction emissions amortized over 30 years would be approximately 15 MT CO₂e per year. As with Project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the Project would be short term, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operational Emissions

Operation of the Project would generate GHG emissions through passenger vehicle and delivery truck trips to and from the Project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the Project); solid waste disposal; generation of electricity associated with the water pump; an on-site septic system; and a yard truck, forklifts, and a diesel-fueled fire pump. CalEEMod and a spreadsheet model were used to calculate the annual GHG emissions based on the operational assumptions described in Section 4.5.3. The estimated operational Project-generated GHG emissions are shown in Table 4.5-4.

Table 4.5-4. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	<i>Metric Tons per Year</i>			
Area	0.02	<0.01	0.00	0.02
Energy	567.70	0.05	0.01	573.12
Mobile	8,857.25	0.06	1.23	9,226.53
Solid waste	139.43	8.24	0.00	345.43
Water supply and wastewater	0.00	38.25	0.13	994.80
Stationary	5.71	0.00	0.00	5.73
Fuel storage tank	0.00	0.00	0.00	0.00
Off-road	1,321.85	0.42	0.00	1,332.73
<i>Amortized 30-Year Construction Emissions</i>				<i>15.20</i>
Operation plus Amortized Construction Total				12,493.57

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; <0.01 = reported emissions less than 0.01. Totals may not add due to rounding.
Source: Appendix B.

As shown in Table 4.5-4, estimated annual Project-generated GHG emissions would be approximately 12,494 MT CO₂e per year as a result of Project operations and amortized construction.

Project Consistency with Applicable GHG-Related Laws and Regulations

The Project’s consistency with statewide GHG reduction strategies is summarized in detail in Table 4.5-5.

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
<i>Building Components/Facility Operations</i>		
Roofs/Ceilings/Insulation	CALGreen Code (Title 24, Part 11) California Energy Code (Title 24, Part 6)	<p>The Project must comply with efficiency standards regarding roofing, ceilings, and insulation. For example:</p> <p><u>Roofs/Ceilings:</u> New construction must reduce roof heat island effects per CALGreen Code Section 106.11.2, which requires use of roofing materials having a minimum aged solar reflectance, thermal emittance complying with Sections A5.106.11.2.2 and A5.106.11.2.3, or a minimum aged Solar Reflectance Index as specified in Table A5.106.11.2.2 or A5.106.11.2.3. Roofing materials must also meet solar reflectance and thermal emittance standards contained in Title 20 Standards.</p> <p><u>Roof/Ceiling Insulation:</u> Requirements for the installation of roofing and ceiling insulation (see Title 24, Part 6 Compliance Manual at Section 3.2.2).</p>
Flooring	CALGreen Code	<p>The Project must comply with efficiency standards regarding flooring materials. For example, for 80% of floor area receiving “resilient flooring,” the flooring must meet applicable installation and material requirements contained in CALGreen Code Section 5.504.4.6.</p>
Window and Doors (Fenestration)	California Energy Code	<p>The Project must comply with fenestration efficiency requirements. For example, the choice of windows, glazed doors, and any skylights for the Project must conform to energy consumption requirements affecting size, orientation, and types of fenestration products used (see Title 24, Part 6 Compliance Manual, Section 3.3).</p>
Building Walls/Insulation	CALGreen Code California Energy Code	<p>The Project must comply with efficiency requirements for building walls and insulation.</p> <p><u>Exterior Walls:</u> Must meet requirements in the current edition of the California Energy Code and comply with Section A5.106.7.1 or A5.106.7.2 of CALGreen for wall surfaces, as well as Section 5.407.1, which requires weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2. Construction must also meet requirements contained in Title 24, Part 6, which vary by material of the exterior walls (see Title 24, Part 6 Compliance Manual, Part 3.2.3).</p> <p><u>Demising (Interior) Walls:</u> Mandatory insulation requirements for demising walls (which separate conditioned from non-conditions space) differ by the type of wall material used (Title 24, Part 6 Compliance Manual Part 3.2.4).</p> <p><u>Door Insulation:</u> Mandatory requirements for air infiltration rates to improve insulation efficiency; they differ according to the type of door (Title 24, Part 6 Compliance Manual Part 3.2.5).</p> <p><u>Flooring Insulation:</u> Mandatory requirements for insulation that depend on the material and location of the flooring (Title 24, Part 6 Compliance Manual Part 3.2.6).</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
Finish Materials	CALGreen	The Project must comply with pollutant control requirements for finish materials. For example, materials including adhesives, sealants, caulks, paints and coatings, carpet systems, and composite wood products must meet requirements in CALGreen to ensure pollutant control (CALGreen Section 5.504.4).
Wet Appliances (Toilets/Faucets/Urinal , Dishwasher/Clothes Washer, Spa and Pool/Water Heater)	CALGreen, California Energy Code, Appliance Efficiency Regulations (Title 20 Standards)	<p>Wet appliances associated with the Project must meet various efficiency requirements. For example:</p> <p><u>Spa and Pool:</u> Use associated with the Project is subject to appliance efficiency requirements for service water heating systems and equipment and spa and pool heating systems and equipment (Title 24, Part 6, Sections 110.3, 110.4, 110.5; Title 20 Standards, Sections 1605.1(g), 1605.3(g); see also California Energy Code).</p> <p><u>Toilets/Faucets/Urinals:</u> Use associated with the Project is subject to new maximum rates for toilets, urinals, and faucets effective January 1, 2016 (Title 20 Standards, Sections 1605.1(h),(i) 1065.3(h),(i)):</p> <ul style="list-style-type: none"> • Showerheads maximum flow rate 2.5 gallons per minute (gpm) at 80 pounds per square inch (psi) • Wash fountains 2.2 x (rim space in inches/20) gpm at 60 psi • Metering faucets 0.25 gallons per cycle • Lavatory faucets and aerators 1.2 gpm at 60 psi • Kitchen faucets and aerators 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi • Public lavatory faucets 0.5 gpm at 60 psi • Trough-type urinals 16 inches length • Wall mounted urinals 0.125 gallons per flush • Other urinals 0.5 gallons per flush <p><u>Water Heaters:</u> Use associated with the Project is subject to appliance efficiency requirements for water heaters (Title 20 Standards, Sections 1605.1(f), 1605.3(f)).</p> <p><u>Dishwasher/Clothes Washer:</u> Use associated with the Project is subject to appliance efficiency requirements for dishwashers and clothes washers (Title 20 Standards, Sections 1605.1(o),(p),(q), 1605.3(o),(p),(q)).</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
Dry Appliances (Refrigerator/Freezer, Heater/Air Conditioner, Clothes Dryer)	Title 20 Standards CALGreen Code	Dry appliances associated with the Project must meet various efficiency requirements. For example: <u>Refrigerator/Freezer:</u> Use associated with the Project is subject to appliance efficiency requirements for refrigerators and freezers (Title 20 Standards, Sections 1605.1(a), 1605.3(a)). <u>Heater/Air Conditioner:</u> Use associated with the Project is subject to appliance efficiency requirements for heaters and air conditioners (Title 20 Standards, Sections 1605.1(b),(c),(d),(e), 1605.3(b),(c),(d),(e) as applicable). <u>Clothes Dryer:</u> Use associated with the Project is subject to appliance efficiency requirements for clothes dryers (Title 20 Standards, Section 1605.1(q)).
	CALGreen Code	Installations of heating, ventilation, and air conditioning; refrigeration and fire suppression equipment must comply with CALGreen Sections 5.508.1.1 and 508.1.2, which prohibits CFCs, halons, and certain HCFCs and HFCs.
Lighting	Title 20 Standards	Lighting associated with the Project are subject to energy efficiency requirements contained in Title 20 Standards. <u>General Lighting:</u> Indoor and outdoor lighting associated with the Project must comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(j),(k),(n), 1605.3(j),(k),(n)). <u>Emergency Lighting and Self-Contained Lighting:</u> Project must also comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(l), 1605.3(l)). <u>Traffic Signal Lighting:</u> For any necessary Project improvements involving traffic lighting, traffic signal modules and traffic signal lamps will need to comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(m), 1605.3(m)).
	California Energy Code	Lighting associated with the Project will also be subject to energy efficiency requirements contained in Title 24, Part 6, which contains energy standards for non-residential indoor lighting and outdoor lighting (see Title 24 Part 6 Compliance Manual, at Sections 5, 6). Mandatory lighting controls for indoor lighting include, for example, regulations for automatic shut-off, automatic daytime controls, demand responsive controls, and certificates of installation (Title 24 Part 6 Compliance Manual at Section 5). Regulations for outdoor lighting include, for example, creation of lighting zones, lighting power requirements, a hardscape lighting power allowance, requirements for outdoor incandescent and luminaire lighting, and lighting control functionality (Title 24 Part 6 Compliance Manual Section 6).

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
	AB 1109	Lighting associated with the Project will be subject to energy efficiency requirements adopted pursuant to AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting to reduce electricity consumption 25% for indoor commercial lighting.
Bicycle and Vehicle Parking	CALGreen Code	The Project will be required to provide compliant bicycle parking, fuel-efficient vehicle parking, and electric vehicle (EV) charging spaces (CALGreen Code Sections 5.106.4, 5.106.5.1, 5.106.5.3).
	California Energy Code	The Project is subject to parking requirements contained in Title 24, Part 6. For example, parking capacity is to meet but not exceed minimum local zoning requirements, and the Project should employ approved strategies to reduce parking capacity (Title 24, Part 6, Section 106.6).
Landscaping	CALGreen Code	CALGreen requires and has further voluntary provisions for the following: <ul style="list-style-type: none"> • A water budget for landscape irrigation use • For new water service, separate meters or submeters must be installed for indoor and outdoor potable water use for landscaped areas of 1,000 to 5,000 square feet • Provide water-efficient landscape design that reduces use of potable water beyond initial requirements for plant installation and establishment
	Model Water Efficient Landscaping Ordinance	The model ordinance promotes efficient landscaping in new developments and establishes an outdoor water budget for new and renovated landscaped areas that are 500 square feet or larger (CCR, Title 23, Division 2, Chapter 2.7).
	Cap-and-Trade Program	Transportation fuels used in landscape maintenance equipment (e.g., gasoline) would be subject to the Cap-and-Trade Program (see “Energy Use,” below).
Refrigerants	CARB Management of High GWP Refrigerants for Stationary Sources	Any refrigerants associated with the Project would be subject to CARB standards. CARB’s Regulation for the Management of High GWP Refrigerants for Stationary Sources reduces emissions of high-GWP refrigerants from leaky stationary, non-residential refrigeration equipment; reduces emissions resulting from the installation and servicing of stationary refrigeration and air conditioning appliances using high-GWP refrigerants; and requires verification GHG emission reductions (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5.1, Section 95380 et seq.).
Consumer Products	CARB High GWP GHGs in Consumer Products	All consumer products associated with the Project will be subject to CARB standards. CARB’s consumer products regulations set VOC limits for numerous categories of consumer products, and limits the reactivity of the ingredients used in numerous categories of aerosol coating products (CCR, Title 17, Division 3, Chapter 1, Subchapter 8.5).

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
Construction		
Use of Off-Road Diesel Engines, Vehicles, and Equipment	CARB In-Use Off-Road Diesel Vehicle Regulation	<p>Any relevant vehicle or machine use associated with the Project will be subject to CARB standards.</p> <p>The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; restricts the adding of older vehicles into fleets starting on January 1, 2014; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).</p> <p>The requirements and compliance dates of the Off-Road Regulation vary by fleet size, as defined by the regulation.</p>
	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in equipment operation would be subject to the Cap-and-Trade Program (see “Energy Use,” below).
Greening New Construction	CALGreen Code	All new construction, including the Project, must comply with CALGreen, as discussed in more detail throughout this table. Adoption of the mandatory CALGreen standards for construction has been essential for improving the overall environmental performance of new buildings; it also sets voluntary targets for builders to exceed the mandatory requirements.
Construction Waste	CALGreen Code	The Project would be subject to CALGreen requirements for construction waste reduction, disposal, and recycling, such as a requirement to recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2, or 5.408.1.3, or meet a local construction and demolition waste management ordinance, whichever is more stringent.
Worker, vendor and truck vehicle trips (on-road vehicles)	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in worker, vendor, and truck vehicle trips would be subject to the Cap-and-Trade Program.
Solid Waste		
Solid Waste Management	Landfill Methane Control Measure	<p>Waste associated with the Project would be disposed of per state requirements for landfills, material recovery facilities, and transfer stations. Per the statewide GHG emissions inventory, the largest emissions from waste management sectors come from landfills and are in the form of methane (CH₄).</p> <p>In 2010, CARB adopted a regulation that reduces emissions from CH₄ in landfills, primarily by requiring owners and operators of certain uncontrolled municipal solid waste landfills to install gas collection and control systems, and requires existing and newly installed gas and control systems to operate in an optimal</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
		manner. The regulation allows local air districts to voluntarily enter into a memorandum of understanding with CARB to implement and enforce the regulation and to assess fees to cover costs of implementation.
	Mandatory Commercial Recycling (AB 341)	<p>AB 341 will require the Project, if it generates 4 cubic yards or more of commercial solid waste per week, to arrange for recycling services using one of the following: self-haul, subscribe to a hauler, arrange for pickup of recyclable materials, or subscribe to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation.</p> <p>The Project will also be subject to local commercial solid waste recycling programs required to be implemented by each jurisdiction under AB 341.</p>
	CALGreen Code	The Project will be subject to CALGreen requirements to provide areas that serve the entire building and are identified for depositing, storing, and collecting nonhazardous materials for recycling (CALGreen Code Section 5.410.1).
Energy Use		
Electricity/Natural Gas Generation	Cap-and-Trade Program	<p>Electricity and natural gas usage associated with the Project will be subject to the Cap-and-Trade Program.</p> <p>The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program. Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, reformulated gasoline blendstock for oxygenate blending (RBOB), distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 metric tons (MT) or more of CO_{2e} annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
Renewable Energy	California RPS (SB X1-2, SB 350, and SB 100)	<p>Energy providers associated with the Project will be required to comply with the RPS set by SB X1 2, SB 350, and SB 100.</p> <p>SB X1 2 required investor-owned utilities, publicly owned utilities, and electric service providers to increase purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. In the interim, each entity was required to procure an average of 20% of renewable energy for the period of January 1, 2011 through December 31, 2013; and were required to procure an average of 25% by December 31, 2016, and 33% by 2020.</p> <p>SB 350 requires retail sellers and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.</p> <p>SB 100 increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California by 2045.</p>
	Million Solar Roofs Program (SB 1)	<p>The Project will participate in California’s energy market, which is affected by implementation of the Million Solar Roofs Program.</p> <p>As part of Governor Schwarzenegger’s Million Solar Roofs Program, California set a goal to install 3,000 megawatts of new solar capacity through 2016. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time.</p>
	California Solar Initiative- Thermal Program	<p>The Project will participate in California’s energy market, which is affected by implementation of the California Solar Initiative – Thermal Program. Multifamily and commercial properties qualify for rebates of up to \$800,000 on solar water heating systems and eligible solar pool heating systems qualify for rebates of up to \$500,000. Funding for the California Solar Initiative –Thermal program comes from ratepayers of Pacific Gas & Electric, SCE, Southern California Gas Company, and San Diego Gas & Electric. The rebate program is overseen by the CPUC as part of the California Solar Initiative.</p>
	Waste Heat and Carbon Emissions Reduction Act (AB 1613, AB 2791)	<p>The Project will participate in California’s energy market, which is affected by implementation of the Waste Heat and Carbon Emissions Reduction Act. Originally enacted in 2007 and amended in 2008, this act directed the CEC, CPUC, and CARB to implement a program that would encourage the development of new combined heat and power systems in California with a generating capacity of not more than 20 megawatts to increase combined heat and power use by 30,000 gigawatt-hour. The</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
		<p>CPUC publicly owned electric utilities and CEC duly established policies and procedures for the purchase of electricity from eligible combined heat and power systems.</p> <p>CEC guidelines require combined heat and power systems to be designed to reduce waste energy; have a minimum efficiency of 60%; have NO_x emissions of no more than 0.07 pounds per megawatt-hour; be sized to meet eligible customer generation thermal load; operate continuously in a manner that meets expected thermal load and optimizes efficient use of waste heat; and be cost effective, technologically feasible, and environmentally beneficial.</p>
 Vehicular/Mobile Sources 		
General	SB 375 and SJCOG RTP/SCS	The Project complies with, and is subject to, the SJCOG adopted RTP/SCS in 2018.
Fuel	Low Carbon Fuel Standard (LCFS)/ EO S-01-07	Auto trips associated with the Project will be subject to the Low Carbon Fuel Standard (EO S-01-07), which required a 10% or greater reduction in the average fuel carbon intensity by 2020 with a 2010 baseline for transportation fuels in California regulated by CARB. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor’s 2030 and 2050 GHG goals.
	Cap-and-Trade Program	<p>Use of gasoline associated with the Project will be subject to the Cap-and-Trade Program. The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase.</p> <p>Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, RBOB, distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 MT or more of CO_{2e} annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.</p>
Automotive Refrigerants	CARB Regulation for Small Containers of Automotive Refrigerant	Vehicles associated with the Project will be subject to CARB’s Regulation for Small Containers of Automotive Refrigerant (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5, Section 95360 et seq.). The regulation applies to the sale, use, and disposal of small containers of automotive refrigerant with a GWP greater than 150. The regulation achieves emission reductions through implementation of four requirements: use of a self-sealing valve on the container, improved labeling instructions, a deposit and recycling program for small containers, and an education program that emphasizes best practices for vehicle recharging. This regulation went into

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
		effect on January 1, 2010, with a 1-year sell-through period for containers manufactured before January 1, 2010. The target recycle rate was initially set at 90%, and rose to 95% beginning January 1, 2012.
Light-Duty Vehicles	AB 1493 (or the Pavley Standard)	<p>Cars that drive to and from the Project will be subject to AB 1493, which directed CARB to adopt a regulation requiring the maximum feasible and cost-effective reduction of GHG emissions from new passenger vehicles. Pursuant to AB 1493, CARB adopted regulations that established a declining fleet average standard for CO₂, CH₄, N₂O, and HFCs (air conditioner refrigerants) in new passenger vehicles and light-duty trucks beginning with the 2009 model year and phased-in through the 2016 model year. These standards were divided into those applicable to lighter and those applicable to heavier portions of the passenger vehicle fleet.</p> <p>The regulations will reduce “upstream” smog-forming emissions from refining, marketing, and distribution of fuel.</p>
	Advanced Clean Car and ZEV Programs	<p>Cars that drive to and from the Project will be subject to the Advanced Clean Car and ZEV Programs. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles (ZEVs) into a single package of standards called Advanced Clean Cars. By 2025, new automobiles will emit 34% less global warming gases and 75% less smog-forming emissions.</p> <p>The ZEV Program will act as the focused technology of the Advanced Clean Cars Program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018–2025 model years.</p>
	Tire Inflation Regulation	<p>Cars that drive to and from the Project will be subject to the CARB Tire Inflation Regulation, which took effect on September 1, 2010, and applies to vehicles with a gross vehicle weight rating of 10,000 pounds or less. Under this regulation, automotive service providers must, inter alia, check and inflate each vehicle’s tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service, to keep a copy of the service invoice for a minimum of 3 years, and to make the vehicle service invoice available to the CARB or its authorized representative upon request.</p>
	EPA and NHTSA GHG and CAFE standards.	<p>Mobile sources that travel to and from the Project site would be subject to EPA and NHTSA GHG and CAFE standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles (75 FR 25324–25728 and 77 FR 62624–63200).</p>

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
Medium- and Heavy-Duty Vehicles	CARB In-Use On-Road Heavy-Duty Diesel Vehicles Regulation (Truck and Bus Regulation)	Any heavy-duty trucks associated with the Project will be subject to CARB standards. The 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. 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 greater than 14,000 pounds.
	CARB In-Use Off-Road Diesel Vehicle Regulation	Any relevant vehicle or machine use associated with the Project will be subject to CARB standards. The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulations impose limits on idling, require a written idling policy, and require a disclosure when selling vehicles; require all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; restricted the adding of older vehicles into fleets starting on January 1, 2014; and require fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.
	Heavy-Duty Vehicle GHG Emission Reduction Regulation	Any relevant vehicle or machine use associated with the Project will be subject to CARB standards. The CARB Heavy-Duty Vehicle GHG Emission Reduction Regulation applies to heavy-duty tractors that pull 53-foot or longer box-type trailers (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 1, Section 95300 et seq.). Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the Project site would be subject to EPA and NHTSA GHG and CAFE standards for medium- and heavy-duty vehicles (76 FR 57106–57513).
Water Use		
Water Use Efficiency	Emergency State Water Board Regulations	Water use associated with the Project will be subject to emergency regulations. On May 18, 2016, partially in response to EO B-27-16, the State Water Board adopted emergency water use regulations (CCR, title 23, Section 864.5 and amended and re-adopted Sections 863, 864, 865, and 866). The regulation directs the State Water Board, Department of Water Resources, and CPUC to implement rates and pricing structures to incentivize water conservation, and calls upon water suppliers, homeowner’s associations, California businesses, landlords and tenants, and wholesale water agencies to take stronger conservation measures.

Table 4.5-5. Applicable Greenhouse Gas–Related Laws and Regulations

Project Component	Applicable Laws/Regulations	Greenhouse Gas Reduction Measures Required for Project
	EO B-37-16	<p>Water use associated with the Project will be subject to Emergency EO B-37-16, issued May 9, 2016, which directed the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The Water Board also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The Water Board and Department of Water Resources will develop new, permanent water use targets to which the Project will be subject.</p> <p>The Water Board will permanently prohibit water-wasting practices, such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.</p>
	EO B-40-17	EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne. It also rescinds EO B-29-15, but expressly states that EO B-37-16 remains in effect and directs the State Water Resources Control Board to continue development of permanent prohibitions on wasteful water use to which the Project will be subject.
	SB X7-7	Water provided to the Project will be affected by SB X7-7’s requirements for water suppliers. SB X7-7, or the Water Conservation Act of 2009, requires all water suppliers to increase water use efficiency. It also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.
	CALGreen Code	The Project is subject to CALGreen’s water efficiency standards, including a required 20% mandatory reduction in indoor water use (CALGreen Code, Division 4.3).
	California Water Code, Division 6, Part 2.10, Sections 10910–10915.	Development and approval of the Project requires the development of a Project-specific Water Supply Assessment.
	Cap-and-Trade Program	The Project proposes utilization of a private well for water and an on-site septic system for sewage disposal. Thus, the Cap-and-Trade Program does not apply to the Project.
	California RPS (SB X1-2, SB 350, SB 100)	Electricity usage associated with Project water and wastewater supply, treatment, and distribution will be required to comply with RPS set by SB X1-2, SB 350, and SB 100.

Notes: AB = Assembly Bill; CARB = California Air Resources Board; CEC = California Energy Commission; CFC = chlorofluorocarbon; CH₄ = methane; CO₂ = carbon dioxide; CO₂e = carbon dioxide equivalent; CPUC = California Public Utilities Commission; EO = Executive Order; EPA = Environmental Protection Agency; GHG = greenhouse gas; GWP = global warming potential; HCFC = hydrochlorofluorocarbon; HFC = hydrofluorocarbon; gpm = gallons per minute; MT = metric tons; N₂O = nitrous oxide; NHTSA = National Highway Traffic Safety Administration

Highway Traffic Safety Administration; PM = particulate matter; RPS = Renewable Portfolio Standard; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SJCOG = San Joaquin Council of Governments; VOC = volatile organic compound; ZEV = zero emission vehicle

As shown in Table 4.5-5, the Project would be required to comply with the various GHG-reducing regulations.

Project Consistency with the County’s General Plan

The County’s General Plan includes various goals and policies that promote the use of clean and renewable energy sources, reduce waste, conserve water, and promote the efficient and sustainable use of energy. The Community Development, Public Facilities and Services, Public Health and Safety, and Natural and Cultural Resources Elements include goals and policies that result in benefits with reducing GHG emissions. Table 4.5-6, Consistency with County’s 2035 General Plan Policies, summarizes the Project’s consistency with applicable County policies.

Table 4.5-6. Consistency with County of San Joaquin’s 2035 General Plan Policies

General Plan Policies	Project Consistency
<p>LU-1.6: New Employment-Generating Uses. The County shall direct new employment-generating uses to locate within Urban and Rural Communities and City Fringe Areas, at freeway interchanges, and in other areas designated for commercial or industrial development. The County may allow employment-generating uses in other unincorporated areas when development proposal demonstrate that the project will not conflict with adjacent uses and will provide: jobs to County residents; adequate infrastructure and services (i.e., water, sewer, drainage, and transportation); and positive tax benefits to the County.</p>	<p><i>Consistent.</i> The Project is an employment-generating land use located near Interstate 205 and Interstate 580 and is designated for industrial development. The Project would also provide additional employment opportunities in the County, which reduces vehicle miles traveled for residents who may otherwise be traveling outside the County for employment.</p>
<p>LU-2.2: Sustainable Building Practices. The County shall promote and, where appropriate, require sustainable building practices that incorporate a “whole system” approach to designing and constructing buildings that consume less energy, water, and other resources, facilitate natural ventilation, use daylight effectively, and are healthy, safe, comfortable, and durable.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.</p>
<p>ED-2.4: Green Economy: The County shall encourage the development and expansion of industries and businesses that rely on environmentally-sustainable products and services, such as renewable energy, green building, clean transportation, water conservation, waste management and recycling, and sustainable land management.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. As implemented under PDF-AQ/GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging spaces, and designate 21 parking space for clean air/EV/vanpool parking.</p>

Table 4.5-6. Consistency with County of San Joaquin’s 2035 General Plan Policies

General Plan Policies	Project Consistency
<p>TM-6.7: Bicycle Amenities. The County shall encourage new large employers to provide bicycle racks.</p>	<p><i>Consistent.</i> The Project would comply with the current California Green Building Standards Code and install short-term and long-term bicycle parking.</p>
<p>PHS-5.14: Energy Consumption Reduction. The County shall encourage new development to incorporate green building practices and reduce air quality impacts from energy consumption.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.</p>
<p>PHS-6.6: Business-related GHG Reduction Strategies. The County shall encourage all businesses to help reduce GHG emissions by: replacing high mileage fleet vehicles with more efficient and/or alternative fuel vehicles; increasing the energy efficiency of facilities; transitioning toward the use of renewable energy instead of non-renewable energy sources; adopting purchasing practices that promote emissions reductions and reusable materials; and increasing recycling.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, as implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting. During construction and operation of the Project, the Project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all waste would be recycled to the maximum extent possible. As implemented under PDF-AQ/GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging spaces, and designate 21 parking space for clean air/EV/vanpool parking.</p>
<p>PHS-6.7: New Development. The County shall require new development to incorporate all feasible mitigation measures to reduce construction and operational GHG emissions.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, as implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.</p>
<p>NCR-5.11: Green Building Practices. The County shall encourage green building practices in new construction.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, as implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.</p>

Table 4.5-6. Consistency with County of San Joaquin’s 2035 General Plan Policies

General Plan Policies	Project Consistency
<p>NCR-5.14: Natural Daylighting in Commercial Operations. The County shall encourage commercial and employment operations to incorporate natural daylighting by the use of windows and skylights to reduce energy demand for lighting.</p>	<p><i>Consistent.</i> The Project buildings would be designed to achieve a minimum LEED certified goal identified by the LEED Green Building Rating System to conserve resources, including energy and renewable resources, as detailed in PDF-AQ/GHG-1. Furthermore, as implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.</p>

Source: County of San Joaquin 2016.

Notes: County = County of San Joaquin; EV = electric vehicle; GHG = greenhouse gas; LEED = Leadership in Energy and Environmental Design.

As discussed in Table 4.5-6, the Project would be generally consistent with the County’s General Plan Policies.

Project Consistency with CARB’s Scoping Plan

The Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California’s GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.⁷ Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others. The Project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. Table 4.5-7 highlights measures that have been developed under the 2030 Scoping Plan and the Project’s consistency with those measures. Table 4.5-7 also includes measures recommended in the 2030 Scoping Plan. To the extent that these regulations are applicable to the Project, its inhabitants, or uses, the Project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
<i>Transportation Sector</i>		
Advanced Clean Cars	T-1	<p><i>Consistent.</i> The Project’s employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.</p>

⁷ The Final Statement of Reasons for the amendments to the State CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that “[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan” (CNRA 2009a).

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	Recommended	<i>Consistent.</i> Implemented by PDF-AQ/GHG-4, the Project would install conduit for 33 future EV charging stations (6% of parking spaces) in accordance with CALGreen standards.
Low Carbon Fuel Standard	T-2	<i>Consistent.</i> Motor vehicles driven by the Project’s employees would use compliant fuels.
Low Carbon Fuel Standard (18% reduction in carbon intensity by 2030)	Recommended	<i>Consistent.</i> Motor vehicles driven by the Project’s employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	<i>Consistent.</i> Implemented by PDF-AQ-GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging stations, and designate 21 parking spaces for clean air/EV/vanpool parking to encourage use of alternative forms of transportation.
Advanced Clean Transit	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Last Mile Delivery	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Reduction in Vehicle Miles Traveled	Recommended	<i>Not applicable.</i> The Project would not prevent CARB from implementing this measure.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	<i>Consistent.</i> These standards would be applicable to the light-duty vehicles that would access the Project site. Motor vehicles driven by the Project’s employees would maintain proper tire pressure when their vehicles are serviced. The Project’s employees would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the Project’s employees would use low-friction oils when their vehicles are serviced. The Project’s employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. In addition, the Project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
<p>Goods Movement Efficiency Measures</p> <ol style="list-style-type: none"> 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction 	T-6	<i>Consistent.</i> The Project would support applicable efficiency measures within this Scoping Plan measure, including increasing efficiency of goods movement.
California Sustainable Freight Action Plan	Recommended	<i>Consistent.</i> The Project would support applicable efficiency measures within this Scoping Plan measure, including increasing efficiency of goods movement. The Project would not inhibit CARB from implementing this Scoping Plan measure.
<p>Heavy-Duty Vehicle GHG Emission Reduction</p> <ol style="list-style-type: none"> 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I) 	T-7	<i>Consistent.</i> Heavy-duty vehicles would be required to comply with CARB GHG reduction measures. In addition, the Project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	<i>Consistent.</i> The Project medium- and heavy-duty vehicles (e.g., delivery trucks) could take advantage of the vehicle hybridization action, which would reduce GHG emissions through increased fuel efficiency. In addition, the Project would not prevent CARB from implementing this measure.
Medium and Heavy-Duty GHG Phase 2	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
High-Speed Rail	T-9	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	<i>Consistent.</i> The Project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	<i>Consistent.</i> The Project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	<i>Not applicable.</i> The Project would not prevent CARB from implementing this measure.
Combined Heat and Power	E-2	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Renewable Portfolios Standard (33% by 2020)	E-3	<i>Consistent.</i> The electricity used by the Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Renewable Portfolios Standard (50% by 2050)	Recommended	<i>Consistent.</i> The electricity used by the Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	<i>Not applicable.</i> The Project would not prevent CARB from implementing this measure.
Water Sector		
Water Use Efficiency	W-1	<i>Consistent.</i> As implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. The Project would not prevent CARB from implementing this measure.
Water Recycling	W-2	<i>Not applicable.</i> Recycled water is not available to the Project site. The Project would not prevent CARB from implementing this measure.
Water System Energy Efficiency	W-3	<i>Not applicable.</i> This is applicable for the transmission and treatment of water, but it is not applicable for the Project.
Reuse Urban Runoff	W-4	<i>Not applicable.</i> The reuse of urban water on site was determined to not be feasible. The Project would not prevent CARB from implementing this measure.
Renewable Energy Production	W-5	<i>Not applicable.</i> Applicable for wastewater treatment systems; not applicable for the Project.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	<i>Consistent.</i> The Project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction. As implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	<i>Consistent.</i> The Project’s buildings would meet green building standards that are in effect at the time of construction. As implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	<i>Consistent.</i> The Project would be required to be constructed in compliance with local green building standards in effect at the time of building construction. As implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure. However, as implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. Furthermore, implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and reduce electricity consumption from warehouse lighting.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Reduce GHG Emissions by 20% in Oil Refinery Sector	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Refinery Flare Recovery Process Improvements	I-4	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Mandatory Commercial Recycling	RW-3	<i>Consistent.</i> During construction and operation of the Project, the Project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-4	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Anaerobic/Aerobic Digestion	RW-5	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Extended Producer Responsibility	RW-6	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Environmentally Preferable Purchasing	RW-7	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Forests Sector		
Sustainable Forest Target	F-1	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
SF ₆ Limits in Non-Utility and Non-Semiconductor Applications	H-2	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.

Table 4.5-7. Project Consistency with 2030 Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Limit High Global Warming Potential Use in Consumer Products	H-4	<i>Consistent.</i> The Project’s employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
40% Reduction in Methane and Hydrofluorocarbon Emissions	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
50% Reduction in Black Carbon Emissions	Recommended	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	<i>Not applicable.</i> This measure does not apply to the Project. The Project would not inhibit CARB from implementing this Scoping Plan measure.

Sources: CARB 2008, 2017.

Notes: CARB = California Air Resources Board; EV = electric vehicle; GHG = greenhouse gas; LEED = Leadership in Energy and Environmental Design; Project = Schulte Warehouse Project; SF₆ = sulfur hexafluoride.

Based on the analysis in Table 4.5-7, the Project would be consistent with the applicable strategies and measures in the Scoping Plan.

Project Consistency with San Joaquin Council of Government’s Regional Transportation Plan/Sustainable Communities Strategy

SJCOG’s 2018 RTP/SCS is a regional growth-management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the San Joaquin region pursuant to SB 375. In addition to demonstrating the region’s ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2018 RTP/SCS outlines a series of policies and strategies to help balance investments that maintain the roadway system, enhance safety and provide congestion relief, and integrate technological advances as part of the transportation solution. Thus, successful implementation of the 2018 RTP/SCS would result in GHG emission reductions, reducing potential

impact on the environment, facilitating efficient public investments, maximizing mobility and accessibility, supporting economic vitality, improving public health, and building on active transportation. The 2018 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The County’s General Plan Land Use Map designates the Project site as General Industrial (I/G), and the County’s Zoning Map identifies the site as General Industrial (I-G); thus, the Project would be consistent with the current zoning and land use designation.

The SJCOG 2018 RTP/SCS provides employee estimates for the years 2015 and 2045. To provide an interim year comparison, this analysis interpolated the region’s projected employee population in the Project’s operational year (2022) based on the average growth rate to compare with the estimated increase in employees generated by the Project. The SJCOG 2018 RTP/SCS estimates that the region’s employee population will increase approximately 23% between 2015 and 2045. Regarding households, the SJCOG 2018 RTP/SCS estimates that the region’s total households will increase approximately 44% between 2015 and 2045. It is anticipated that the Project would potentially add 555 full-time employees, which would not exceed the interpolated annual growth rate of 2,261 employees a year for the region. Based on these considerations, vehicle trip generation and planned development for the site are concluded to have been anticipated in the SJCOG growth projections because the land use designation and zoning would remain the same (i.e., General Industrial). Therefore, the addition of Project-generated employees to the region’s estimated employee population would not exceed the SJCOG 2018 RTP/SCS forecasted employment population.

Table 4.5-8 summarizes the Project’s consistency with the SJCOG’s 2018 RTP/SCS policies and supportive strategies.

Table 4.5-8. Project Consistency with SJCOG’s 2018 RTP/SCS Policies and Supportive Strategies

2018 RTP/SCS Supportive Strategies	Strategy Number	Project Consistency
<i>Policy: Enhance the Environment for Existing and Future Generations and Conserve Energy</i>		
Encourage efficient development patterns that maintain agricultural viability with natural resources	#1	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Enhance the connection between land use and transportation choices through projects supporting energy and water efficiency	#2	<i>Consistent.</i> The Project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction. As implemented by PDF-AQ/GHG-1, the Project would be designed at a minimum to meet LEED certified rating, which would conserve water resources. Furthermore, as implemented by PDF-AQ/GHG-2, the Project would install 2%–3% skylights in warehouse buildings for natural lighting and to reduce electricity consumption from warehouse lighting. Implemented by PDF-AQ-GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging stations, and designate 21 parking spaces for clean air/EV/vanpool parking to encourage use of alternative forms of transportation.

Table 4.5-8. Project Consistency with SJCOG’s 2018 RTP/SCS Policies and Supportive Strategies

2018 RTP/SCS Supportive Strategies	Strategy Number	Project Consistency
Improve air quality by reducing transportation-related emissions	#3	<i>Consistent.</i> The Project would result in criteria air pollutant and GHG emissions as a result of operation-generated mobile emissions. However, as implemented by PDF-AQ-GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging stations, and designate 21 parking spaces for clean air/EV/vanpool parking to encourage use of alternative forms of transportation. Furthermore, the Project would provide a regional hub for goods movement, connecting with the arterial goods distribution system.
Policy: Maximize Mobility and Accessibility		
Improve regional transportation system efficiency	#4	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Optimize public transportation system to provide efficient and convenient access for users at all income levels	#5	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Facilitate transit-oriented development to maximize existing transit investments	#6	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Provide transportation improvements to facilitate non-motorized travel, including incorporation of complete streets elements as appropriate	#7	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Improve major transportation corridors to minimize impacts on rural roads	#8	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Policy: Increase Safety and Security		
Facilitate projects that reduce the number of and severity of traffic incidents	#9	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Encourage and support projects that increase safety and security	#10	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Improve communication and coordination between agencies and the public for emergency preparedness and support local and state efforts for transportation network resiliency, reliability, and climate adaptation	#11	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Policy: Preserve the Efficiency of the Existing Transportation System		
Optimize existing transportation system capacity through available and/or innovative strategies	#12	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Support the continued maintenance and preservation of the existing transportation system	#13	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.

Table 4.5-8. Project Consistency with SJCOG’s 2018 RTP/SCS Policies and Supportive Strategies

2018 RTP/SCS Supportive Strategies	Strategy Number	Project Consistency
Encourage system efficiency with transportation improvements that facilitate improvements in the jobs/housing balance	#14	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Improve transportation options linking residents to employment centers within and out of the County	#15	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Policy: Support Economic Vitality		
Improve freight access to key strategic economic centers	#16	<i>Consistent.</i> The Project would provide a regional hub for goods movement, connecting with the arterial goods distribution system.
Promote safe and efficient strategies to improve movement of goods by water, air, rail and truck	#17	<i>Consistent.</i> Implemented by PDF-AQ-GHG-3 through PDF-AQ/GHG-5, the Project would install conduit for future electric truck charging capabilities, install conduit for 33 future EV charging stations, and designate 21 parking spaces for clean air/EV/vanpool parking to encourage use of alternative forms of transportation. The Project would provide a regional hub for goods movement, connecting with the arterial goods distribution system.
Support transportation improvements that improve economic competitiveness, revitalize commercial corridors and strategic economic centers, and enhance travel and tourism opportunities	#18	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Policy: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts		
Provide equitable access to transportation planning	#19	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Engage in public early, clearly, and continuously	#20	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Use a variety of methods to engage the public, encouraging representation from diverse income and ethnic backgrounds	#21	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Policy: Maximize Cost-Effectiveness		
Support the use of state and federal grants to supplement local funding and pursue discretionary grant funding opportunities from outside the region	#22	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Support projects that maximize cost effectiveness	#23	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Maximize funding of existing transportation options	#24	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.

Table 4.5-8. Project Consistency with SJCOG’s 2018 RTP/SCS Policies and Supportive Strategies

2018 RTP/SCS Supportive Strategies	Strategy Number	Project Consistency
<i>Policy: Improve the Quality of Life for Residents</i>		
Encourage transportation investments that support a greater mix of housing options at all income levels	#25	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Improve the connection between land use and transportation	#26	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.
Enhance public health through active transportation projects	#27	<i>No conflict.</i> The Project would not prevent SJCOG from implementing this strategy.

Source: SJCOG 2018.

Notes: EV = electric vehicle; GHG = greenhouse gas; Project = Schulte Warehouse Project; SJCOG = San Joaquin Council of Governments; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy

Based on the analysis in Table 4.5-8, the Project would be consistent with the SJCOG 2018 RTP/SCS.

Project Consistency with Senate Bill 32 and Executive Order S-3-05

The Project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and SB 32. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, must ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. Although there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that “California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32” (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014):

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the 2030 Scoping Plan, which states the following (CARB 2017):

The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

The Project is consistent with the Scoping Plan, 2018 RTP/SCS, and County's General Plan, which all promote economic growth while achieving greater energy efficiency. The Project would also be consistent with SJCOG's 2018 RTP/SCS, SB 32, and EO S-3-05 by being consistent with vehicle miles traveled reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. The Project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the Project's impacts with respect to GHG emissions would be less than significant.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to greenhouse gas emissions?

Less-Than-Significant Impact. As discussed in Section 4.5.1, Existing Conditions, GHG emissions inherently contribute to cumulative impacts, and, thus, any additional GHG emissions would result in a cumulative impact. Development of the Project site would be consistent with the Scoping Plan, 2018 RTP/SCS, and County's General Plan, which all promote economic growth while achieving greater energy efficiency. The Project would also be consistent with SJCOG's 2018 RTP/SCS, SB 32, and EO S-3-05 by being consistent with vehicle miles traveled reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. Given the Project's consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions, it is concluded that the Project's incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. Therefore, the Project would result in a less than cumulatively considerable GHG emissions impact.

4.5.5 Mitigation Measures

No mitigation measures are required.

4.5.6 Level of Significance After Mitigation

Threshold A: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold B: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Project would result in **less-than-significant impacts** with regard to conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. No mitigation is required.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to greenhouse gas emissions?

Given the Project's consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions, the Project's incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. Therefore, the Project would result in a **less than cumulatively considerable** GHG emissions impact.

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4.6 Noise

This section describes the existing noise conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the noise calculations and specifications prepared by Dudek in January 2021 (Appendix E).

4.6.1 Existing Conditions

4.6.1.1 Noise and Vibration Fundamentals and Terminology

Noise and Sound

Noise is commonly defined as unwanted sound. Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz. The normal frequency range of hearing for most people extends from approximately 20 to 20,000 hertz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting, called “A” weighting, is typically used for quieter noise levels, which de-emphasizes the low-frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the “noise level” and is referenced in units of dBA.

Because sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dB increase in the noise level. Changes in a community noise level of less than 3 dB are not typically noticed by the human ear (Caltrans 2013). Changes from 3 to 5 dB may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dB increase is readily noticeable. The human ear perceives a 10 dB increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual’s noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. The equivalent continuous sound level (L_{eq}), also referred to as the average sound level, is a single number representing the fluctuating sound level in A-weighted decibels (dBA) over a specified period of time. It is a sound-energy average of the fluctuating level and is equal to a constant unchanging sound of that dB level. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes) and commercial and industrial activities are the greatest. However, noise sources experienced during nighttime hours, when background levels are generally lower, can be potentially more conspicuous and irritating to the receiver. To evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed “community noise equivalent level” (CNEL) was developed. The CNEL scale represents a time-weighted 24-

hour average noise level based on the A-weighted sound level. CNEL accounts for the increased noise sensitivity during the evening hours (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.) by adding 5 dB to the average sound levels occurring during the evening hours and 10 dB to the sound levels occurring during nighttime hours. Additional noise definitions are provided below.

Ambient Noise Level. The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

A-Weighted Sound Level (dBA). The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with community equivalent sound level.

Community Noise Equivalent Level (CNEL). CNEL is the A-weighted equivalent continuous sound exposure level for a 24-hour period with a 5 dB added to the sound during the evening hours (7 p.m.–10 p.m.) and a 10 dB adjustment added to sound levels occurring during the nighttime hours (10 p.m.–7 a.m.).

Day Night Average Sound Level (DNL or L_{dn}). L_{dn} is similar to the CNEL noise metric, except that no penalty is added during the evening hours (7 p.m.–10 p.m.). Typically, the CNEL and L_{dn} noise metrics vary by approximately 1 dB or less and are often considered to be functionally equivalent.

Decibel (dB). The decibel is a unit for measuring sound pressure level and is equal to 10 times the logarithm to the base 10 of the ratio of the measured sound pressure squared to a reference pressure, which is 20 micropascals.

Vibration Characteristics

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources, such as buses and trucks, to be perceptible, even in locations close to major roads. Some common sources of vibration are trains; buses on rough roads; and construction activities, such as blasting, pile driving, and heavy earth-moving equipment.

Several methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square amplitude is most frequently used to describe the effect of vibration on the human body and is defined as the average of the squared amplitude of the signal. Decibel notation (vibration decibel [VdB]) is commonly used to measure root mean square. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of vibration can damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible (FTA 2018).

4.6.1.2 Noise-Sensitive Land Uses

Land use types considered to be noise-sensitive include residences, colleges, schools and universities, churches, libraries, hospitals, rest homes, long- term medical or mental health care facilities, or other places where an expectation of relative quiet is customary.

4.6.1.3 Existing Noise Levels

The Project site is located at 14800 W. Schulte Road in San Joaquin County (County). The Project site is adjacent to the southerly limits of the City of Tracy and is within the City of Tracy’s Sphere of Influence. The Project site is approximately 37.7 acres, with a Project size of 678,913 square feet. The Project site is currently vacant but was formerly used as a biomass electrical generation facility, which was decommissioned and demolished in 2019. The Project site is bounded by West Schulte Road and agricultural uses to the north, Quality Road and agricultural uses to the east, manufacturing/warehouse use to the south, and warehouse/distribution use to the west.

Ambient noise measurements were conducted on October 14, 2020, at or adjacent to nearby noise-sensitive land uses. Table 4.6-1 provides the location, date, and time the noise measurements were taken. The noise measurements were conducted using a Larson Davis Model 831 sound level meter equipped with a 0.5-inch, pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current American National Standards Institute standard for a Type 1 (Precision) sound level meter. The accuracy of the sound level meter was verified using a field calibrator before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Six short-term noise measurement locations (ST) that represent existing sensitive receivers were selected near the Project site. These locations are depicted as receivers ST1–ST6 in Figure 4.6-1, Noise Measurement Locations. The measured energy-averaged (L_{eq}), minimum (L_{min}), and maximum (L_{max}) noise levels are provided in Table 4.6-1. The field noise data sheets are included in Appendix E-1. The primary noise sources at the sites identified in Table 4.6-1 consisted of traffic along adjacent and distant roadways; distant barking dogs represented occasional secondary noise sources. As shown in Table 4.6-1, the measured sound levels ranged from approximately 54 dBA L_{eq} at ST2 to 65 dBA L_{eq} at ST1.

Table 4.6-1. Measured Noise Levels

Receptor	Location	Date	Time	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST1	West of Project site, adjacent to CAL FIRE Station 26 at 16502 W. Schulte Road	10/14/2020	2:42 p.m.–2:52 p.m.	64.6	49.2	76.4
ST2	West of Project site, adjacent to residence at 25730 Hansen Road	10/14/2020	2:13 p.m.–2:23 p.m.	54.3	44	65.6
ST3	East of Project site, adjacent to residence at 25613 South Lammers Road	10/14/2020	3:27 p.m.–3:37 p.m.	58.3	44.1	68
ST4	East of Project site, adjacent to residence at 25700 South Lammers Road	10/14/2020	3:46 p.m.–3:56 p.m.	58.3	47.2	69.3

Table 4.6-1. Measured Noise Levels

Receptor	Location	Date	Time	Leq (dBA)	Lmin (dBA)	Lmax (dBA)
ST5	Northwest of Project site, adjacent to residence at 24142 Hansen Road	10/14/2020	2:21 p.m.–2:31 p.m.	64	54.3	80.3
ST6	West of Project site, adjacent to residence at 24365 Mountain House Parkway	10/14/2020	1:58 p.m.–2:08 p.m.	60.3	49.6	71.5

Source: Appendix E-1.

Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; dBA = A-weighted decibels.

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal noise standards that would directly regulate environmental noise during construction and operation of the Project. The following is provided because guidance summarized herein is used for or pertains to the analysis.

Federal Transit Administration

Noise. In its Transit Noise and Vibration Impact Assessment Manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period (FTA 2018) when “detailed” construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project. Although this FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the state and local jurisdictional levels.

Vibration. The FTA’s Transit Noise and Vibration Impact Assessment Manual also establishes vibration guidance for various land uses based on their potential for human annoyance and activity disruption. In general, and according to FTA guidelines, groundborne vibration of 75 VdB or greater would be considered potentially annoying. Vibration of 85 VdB or greater would likely be highly annoying and disruptive for most land uses (FTA 2018). These guidelines are generally used to evaluate the significance of operational effects from transit projects. However, these guidelines are referenced in this Environmental Impact Report for the purposes of quantitatively describing the levels of vibration that are typically considered disruptive.



SOURCE: Bing Maps 2020, San Joaquin County

FIGURE 4.6-1

Noise Measurement Locations

14800 W. Schulte Road Logistics Center Project

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Typically, potential building and structural damages are the foremost concern when evaluating the impacts of construction-related vibration. Table 4.6-2 summarizes the FTA's vibration guidelines for building and structural damage.

Table 4.6-2. Groundborne Vibration Damage Potential

Building Category	Vibration Damage (inches per second PPV)
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: FTA 2018.

Note: PPV = peak particle velocity.

State

Government Code Section 65302(g)

California Government Code Section 65302(g) requires the preparation of a noise element in a general plan, which must identify and appraise noise problems in the community. The noise element must recognize the guidelines adopted by the Office of Noise Control in the State Department of Health Services, and must quantify, to the extent practicable, current and projected noise levels for the following sources:

- Highways and freeways
- Primary arterials and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Aviation and airport-related operations
- Local industrial plants
- Other ground stationary noise sources contributing to the community noise environment

California General Plan Guidelines

The California General Plan Guidelines, published by the Governor's Office of Planning and Research, provides guidance for the acceptability of specific land use types within areas of specific noise exposure (OPR 2003). Table 4.6-3 presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. The Governor's Office of Planning and Research guidelines are advisory in nature. Local jurisdictions have the responsibility to set specific noise standards based on local conditions.

Table 4.6-3. Land Use Compatibility for Community Noise Environments

Land Use	Community Noise Exposure (CNEL)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential low density, single-family, duplex, mobile homes	50-60	55-70	70-75	75-85
Residential multiple-family	50-65	60-70	70-75	70-85
Transit lodging – motel, hotels	50-65	60-70	70-80	80-85
Schools, libraries, churches, hospitals, nursing homes	50-70	60-70	70-80	80-85
Auditoriums, concert halls, amphitheaters	N/A	50-70	N/A	65-85
Sports arenas, outdoor spectator sports	N/A	50-75	N/A	70-85
Playgrounds, neighborhood parks	50-70	N/A	67.5-77.5	72.5-85
Golf courses, riding stables, water recreation, cemeteries	50-70	N/A	70-80	80-85
Office buildings, business commercial and professional	50-70	67.5-77.5	75-85	N/A
Industrial, manufacturing, utilities, agriculture	50-75	70-80	75-85	N/A

Source: OPR 2003.

Notes: CNEL = community noise equivalent level; N/A = not applicable.

- 1 Normally Acceptable: Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- 2 Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
- 3 Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design.
- 4 Clearly Unacceptable: New construction or development should generally not be undertaken.

Local

Although the Project would be located in the County, there are also nearby noise-sensitive receptors in the City of Tracy. The applicable noise standards of both jurisdictions are provided below.

San Joaquin County

San Joaquin County General Plan

Part 3.3, Public Health and Safety, of the County's General Plan includes a noise section that addresses noise goals and policies. Table PHS-1, Non-Transportation Noise Level Performance Standards for Noise-Sensitive Uses at Outdoor Activity Areas, lists a daytime (7 a.m. to 10 p.m.) standard of 50 dBA $L_{eq\ 1-hour}$ and 70 dBA L_{max} , and a nighttime standard of 45 dBA $L_{eq\ 1-hour}$ and 65 dBA L_{max} . Noise from transportation sources is addressed in Table PHS-2, which lists a maximum allowable noise standard of 65 dBA L_{dn} for outdoor residential uses and 45 dBA L_{dn} for interior residential spaces. These standards are applicable to new or existing residential areas affected by new or existing sources. Additionally, Goal PHS-9.4, Acceptable Vibration Levels, requires that construction projects anticipated to generate a significant amount of vibration ensure acceptable interior vibration levels at nearby vibration-sensitive uses based on FTA criteria (County of San Joaquin 2016).

San Joaquin County Municipal Code

Title 9, Chapter 9-1025.9 of the County of San Joaquin (County) Municipal Code has noise performance standards for various land use types that are consistent with the County’s General Plan. The Municipal Code also specifies exemptions to the various standards, including for noise from construction activities, provided that such activities do not take place before 6 a.m. or after 9 p.m. on any day.

City of Tracy

City of Tracy General Plan

The City of Tracy General Plan Noise Element includes as Objective N-1.2, Control Sources of Excessive Noise, Policy P4, the requirement in new development projects that all construction in the vicinity of noise-sensitive land uses (including residences) be limited to daylight hours or 7 a.m. to 7 p.m. Additionally, the following construction noise control measures are required (City of Tracy 2011):

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and are appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are in the vicinity.
- Utilize “quiet” air compressors and other stationary noise sources where such technology exists.

City of Tracy Municipal Code

Section 4.12.750, General Sound Level Limits, of the City of Tracy Municipal Code specifies 1-hour average sound level limits by land use:

- Residential Districts: 55 dBA L_{eq} 1-hour
- Commercial Districts: 65 dBA L_{eq} 1-hour
- Industrial Districts: 75 dBA L_{eq} 1-hour
- Agricultural: 75 dBA L_{eq} 1-hour
- AMO Aggregate Mineral: 75 dBA L_{eq} 1-hour

4.6.3 Thresholds of Significance

The significance criteria used to evaluate a project’s impacts related to noise are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if a project would:

- A. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- B. Result in generation of excessive groundborne vibration or groundborne noise levels.

- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.
- D. Result in cumulatively considerable noise impacts.

Threshold C was analyzed in the Initial Study (Appendix A) and was not carried forward for further analysis in this Environmental Impact Report. See Chapter 5, Effects Found Not to Be Significant, for additional detail.

Significance Criteria

Construction Noise

Construction activity noise would be considered significant if it exceeds an 8-hour average noise level of 80 dBA L_{eq} at or beyond a noise-sensitive receiver's property boundary, or if the allowable hours of construction are exceeded (6 a.m. to 9 p.m. in the unincorporated County or 7 a.m. to 7 p.m. in the City of Tracy).

Off-Site Project-Attributed Transportation Noise

A traffic noise impact would be considered significant if a project's contribution results in an exceedance of applicable noise standards or if the project resulted in an increase in traffic noise greater than 3 dB CNEL at an existing noise-sensitive land use.

On-Site Project-Attributed Stationary Noise

A noise impact would be considered significant if noise from typical operation of heating, ventilation, and air conditioning (HVAC) and other electro-mechanical systems or other on-site operational noise associated with a project resulted in an exceedance of applicable noise standards or if the project resulted in an increase in ambient noise greater than 3 dB CNEL at an existing noise-sensitive land use.

Vibration

Guidance from the FTA indicates that a vibration velocity level of 75 VdB received at a structure would be considered potentially annoying by occupants (FTA 2018). As for the receiving structure itself, aforementioned FTA guidance discussed in Section 4.6.2, Relevant Plans, Policies, and Ordinances, recommends that a vibration level of 0.2 inches per second PPV would represent the threshold for building damage risk for non-engineered timber and masonry construction. Although the nearest residences are likely more robust, this analysis conservatively uses this standard.

4.6.4 Impacts Analysis

Threshold A: Would the Project result in 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?

Less-Than-Significant Impact. 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, as discussed further below.

Short-Term Construction Impacts

Based on information provided by the Project applicant, it was assumed that construction of the Project would commence in July 2021 and would last approximately 10 months, ending in April 2022. During construction of the Project, activities would include site preparation, grading, construction of structures, paving, and application of architectural coating. Construction-related noise would also be generated on local roadways and from worker vehicles and trucks accessing the Project site.

On-Site Construction Noise

Construction activities would require the use of standard construction equipment such as loaders, dozers, backhoes, excavators, graders, pumps, rollers, and cranes. Construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment) would not be necessary for the Project.

The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 4.6-4. The noise values represent maximum noise generation, or full-power operation of the equipment. Simultaneous operation of more than one piece of equipment would increase the sound level of the equipment operating individually. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dBA at 50 feet from their operating locations. As one increases the distance between equipment and/or increases the separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activity is generally lower because maximum noise generation may only occur up to 50% of the time.

Table 4.6-4. Construction Equipment Maximum Noise Emission Levels

Equipment	Maximum Sound Level (dBA) 50 Feet from Source
Roller	74
Concrete vibrator	76
Pump	76
Saw	76
Backhoe	80
Air compressor	81
Generator	81
Compactor	82
Concrete pump	82
Crane, mobile	83
Concrete mixer	85
Dozer	85
Grader	85
Impact wrench	85
Loader	85
Pneumatic tool	85
Jackhammer	88

Table 4.6-4. Construction Equipment Maximum Noise Emission Levels

Equipment	Maximum Sound Level (dBA) 50 Feet from Source
Truck	88
Paver	89

Source: FTA 2018.

The nearest sensitive receptors to the Project site are the residential land uses approximately 1,500 feet northeast, approximately 3,000 feet southwest, and approximately 3,000 feet east, all located within the unincorporated County. The nearest noise-sensitive land use within the City of Tracy is located approximately 3,300 feet east of the Project site.

The Federal Highway Administration’s Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at the nearest noise-sensitive land uses. Although the model was funded and promulgated by the Federal Highway Administration, the RCNM is often used for non-roadway projects because the same types of equipment used for roadway projects are also used for other project types. Input variables for the RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver. No topographical or structural shielding was assumed in the modeling. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical demolition activity patterns (FHWA 2008). Those default duty-cycle values were used for this noise analysis.

Using the Federal Highway Administration’s RCNM construction noise model and construction information (types and number of construction equipment by phase), the estimated noise levels from construction were calculated (summarized in Table 4.6-5). The RCNM inputs and outputs are provided in Appendix E-2. Note that these estimates are conservative because they do not account for any potential reduction in noise levels from topographical shielding, ground absorption effects, or atmospheric absorption.

Table 4.6-5. Construction Noise Levels at Noise-Sensitive Uses

Off-Site Receptor Location	Estimated Construction Noise Levels (dBA Leq 8-hr)					Exceed Significance Threshold (80 dBA Leq 8-hr)
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	
Nearest residence at 1,500 feet northeast	55	57	52	51	44	No
Residence 3,000 feet southwest	49	51	47	46	38	No
Residence 3,000 feet east	49	51	47	46	38	No
Residence 3,300 feet east	48	51	47	45	37	No

Source: Appendix E-2.

Notes: dBA = A-weighted decibel; L_{eq} = average noise energy level.

As shown in Table 4.6-5, the highest noise levels from construction are predicted to occur at the nearest residences located northeast of the Project site, in the unincorporated County, during the grading phase, when noise levels are estimated to be approximately 57 dBA L_{eq} . This would be less than the ambient noise levels measured in the vicinity of these residences (as represented by measurements ST3 and ST4), where the noise levels were measured at approximately 58 dBA L_{eq} . At residences located to the southwest and to the east, the highest estimated noise levels are also estimated to occur during grading, when noise levels are estimated to be approximately 51 dBA L_{eq} . This noise level is relatively low, by community noise standards, and again would be less than the lowest ambient noise measurements conducted in the Project vicinity (54 dBA L_{eq} at ST2). At residences located farther away, such as the residences located approximately 3,300 feet away, noise levels would range from approximately 37 dBA L_{eq} during the architectural coating phase to approximately 51 dBA L_{eq} during grading. Construction work may be audible at times but would not be considered intrusive by a person of average sensibilities. Additionally, the noise levels would be well below the 80 dBA $L_{eq,8-hr}$ threshold recommended by the FTA in the absence of a local numerical construction noise standard. Because construction noise would be below the threshold of significance and because the construction work would not take place before 7 a.m. or after 7 p.m. (the more restrictive of the two local construction noise prohibitions, from the City of Tracy) the construction noise impact would be less than significant, and no mitigation is required.

Off-Site Roadway Construction Noise

The Project would result in local, short-term increases in roadway noise as a result of construction traffic. Based on information provided by the Project applicant and verified construction assumptions developed as part of the Project's air quality/greenhouse gas analysis, Project-related traffic would include workers commuting to and from the Project site and vendors bringing materials; there would be no haul trucks bringing or removing excavated soils to or from the Project site. Construction worker estimates and vendor truck trips would consist of the following:

- Typical average daily worker trips of 16 to 30 trips per day (all phases except the building construction phase).
- Typical average daily vendor truck trips of 4 to 9 trips per day (all phases except the building construction phase).
- 100 average daily worker trips during the building construction phase.
- Up to 20 average daily vendor truck trips during the building construction phase.

Using the construction trip estimates and the Federal Highway Administration's Traffic Noise Prediction Model (TNM 2.5) (FHWA 2004), traffic noise level modeling was performed to estimate the temporary increase in noise from construction worker and heavy truck trips when added to existing traffic volumes. Based on a review of average daily traffic volumes by the Project's transportation analysts, West Schulte Road currently carries approximately 8,403 vehicles per day between South Lammers Road and Hansen Road, and approximately 12,826 vehicles per day between Hansen Road and Mountain House Parkway.

The average daily traffic volumes cited above for West Schulte Road were used as the basis to which the typical and peak-period construction vehicles were added for the purpose of estimating the resulting traffic noise increase during Project construction. Traffic modeling input and output files are provided in Appendix E-3. As shown in Table 4.6-6, during typical construction work, the increase in average hourly traffic noise levels would be approximately 0 dB when rounded to whole decibels along West Schulte Road (the roadway along which all of the construction vehicles would travel). During the building construction phase, when the number of daily worker and vendor trips would be at the peak, the increase would be approximately 0 to 1 dB when rounded to whole decibels. Although individual truck pass-by trips would be clearly audible, the change in the traffic noise level on an hourly average basis would be negligible. A change in noise level of 3 dB or less is typically not readily perceptible to the average

listener. Therefore, traffic related to construction activities would not result in 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. Impacts from Project-related construction traffic noise would be less than significant, and no mitigation is required.

Table 4.6-6. Project-Related Construction Vehicle Trip Noise

Roadway Segment	Existing Noise Level ¹ (dBA L _{eq})	Existing plus Project Construction Vehicles – (Typical) ¹ (dBA L _{eq})	Existing plus Project Construction Vehicles – (Peak) ¹ (dBA L _{eq})	Increase (Typical) (dB)	Increase (Peak) (L _{eq} dB)
West Schulte Road: Mountain House Road to Hansen Road	69	69	69	0	0
West Schulte Road: Hansen Road to South Lammers Road	67	67	68	0	1

Source: Appendix E-3.

Notes: dBA = A-weighted decibel; L_{eq} = average noise energy level; dB = decibel.

¹ Estimated noise levels at a distance of 100 feet from West Schulte Road centerline.

Long-Term Operational Noise

Off-Site Operational Noise (Traffic Noise Levels)

The Project would generate traffic along nearby roads, including West Schulte Road, South Lammers Road, Hansen Road, and Mountain House Parkway. The traffic noise levels associated with selected roadways in the Project vicinity were determined based on ambient noise measurements and using the Federal Highway Administration's TNM 2.5. Information used in the model included the Existing, Existing-with-Project, Future-without-Project, and Future-with-Project traffic volumes. Traffic volumes for each of the previously mentioned scenarios are provided in Appendix F. This traffic data was used to model noise levels under those scenarios. Noise levels were modeled at representative noise-sensitive receivers. The receivers were modeled to be 5 feet above the local ground elevation. The modeled results for the Existing, Existing-with-Project, Future-without-Project, and Future-with-Project scenarios are summarized in Table 4.6-7, and the TNM input/output files are included in Appendix E-3. As shown in Table 4.6-7, the Existing-plus-Project and Future-with-Project traffic volumes would result in a noise level increase of 1 dB or less (rounded to whole numbers) compared to the without-Project scenarios. Furthermore, the Project would not result in an exceedance of the County of San Joaquin noise standard for transportation sources of 65 dBA L_{dn} or of other applicable noise standards. As discussed in Section 4.6.3, Thresholds of Significance, off-site noise impacts due to Project-generated traffic would be considered significant if the Project-generated traffic would cause an increase of more than 3 dB or if applicable noise standards were exceeded. Because the maximum predicted traffic noise increase would be 1 dB, the additional Project-related traffic volumes along the adjacent roads would not substantially increase the existing or future noise levels in the Project vicinity, and operational traffic-related noise impacts would be less than significant.

Table 4.6-7. Traffic Noise (Existing and Future Noise Levels)

Modeled Receptor	Existing (dBA CNEL/L _{dn})	Existing with Project (dBA CNEL/L _{dn})	Difference (dB)	Future (dBA CNEL/L _{dn})	Future with Project (dBA CNEL/L _{dn})	Difference (dB)
ST1: West of Project site, adjacent to CAL FIRE Station 26 at 16502 West Schulte Road	66	66	0	69	69	0
ST2: West of Project site, adjacent to residence at 25730 Hansen Road	55	55	0	62	62	0
ST3: East of Project site, adjacent to residence at 25613 South Lammers Road	60	60	0	61	62	1
ST4: East of Project site, adjacent to residence at 25700 South Lammers Road	59	59	0	61	61	0
ST5: Northwest of Project site, adjacent to residence at 24142 Hansen Road	64	64	0	69	69	0
ST6: West of Project site, adjacent to residence at 24365 Mountain House Parkway	62	62	0	65	65	0

Source: Appendix E-3.

Notes: dBA = A-weighted decibel; CNEL = community noise equivalent level; L_{dn} = day night average sound level; dB = decibel.

On-Site Operational Noise

Project-related operational noise sources are expected to include idling trucks, delivery truck activities, backup alarms, loading and unloading of dry goods, rooftop air conditioning units, and parking lot vehicle movements. The following analysis evaluates noise from these on-site operation noise sources. The analysis is based on in-house spreadsheets, which incorporate standard industry calculations for the sum of noise from multiple sources, outdoor attenuation with distance from the noise source(s), and attenuation from barrier placement between sources and receivers.

Outdoor Mechanical Equipment

The three proposed warehouse spaces would not be served by heating or air conditioning equipment. However, the floor plans include office spaces within each of the proposed buildings that would be served by heating and air conditioning equipment. The proposed office areas on the Site Plan are indicated to have floor areas of approximately 3,000 square feet each (approximately 9,000 square feet combined). Based on similar size offices in this region, it is anticipated that each of the three office spaces would be equipped with one 4-ton package HVAC unit. For the analysis of noise from HVAC equipment operation, a York Model ZF-048 package HVAC unit was used as a reference. Noise level data provided by the manufacturer was used to determine the noise levels that would be generated by each of the HVAC package units. The York Model ZF-048 package HVAC unit has a sound power rating of 80 dBA (Appendix E-4). Based on the applicant information provided, there would be a 7-foot-high parapet extending along the perimeter of the roof.

Assuming all the equipment is operating simultaneously for a minimum period of 1 hour, the worst-case calculated noise level at the Project's property lines and the nearest noise-sensitive land uses is presented in Table 4.6-8. The maximum hourly noise level for all the HVAC equipment operating at each examined point along the property and nearest noise-sensitive receivers would range from 6 to 29 dBA L_{eq} , which is substantially less than the County's daytime or nighttime noise standard of 50 dBA L_{eq} and 45 dBA L_{eq} , respectively, for noise-sensitive uses, and is also well below the City of Tracy's Municipal Code noise standards of 75 dBA L_{eq} for industrial uses and 55 dBA L_{eq} for residential uses.

Assuming the office area was to be occupied from 8 a.m. to 5 p.m., the resulting CNEL value was calculated and is reported in Table 4.6-8. Project-related noise levels from HVAC operation at each examined point along the property and nearest noise-sensitive receivers would be well below existing CNEL noise levels based on the traffic noise model results (Table 4.6-7) as well as extrapolating from the short-term ambient noise level measurements (Table 4.6-1); thus, an increase of 3 dB or more would not occur. The noise-level calculation spreadsheets for the HVAC package units are included in Appendix E-4.

Table 4.6-8. Mechanical Equipment Operation Noise Summary of Results

Equipment	Noise Level at Property Boundary and Nearest Noise-Sensitive Land Uses				
	Receiver Location/Land Use	Average Noise Level (dBA L_{eq})	Applicable Standard (dBA L_{eq})	CNEL ¹	Noise Standard Exceedance?
HVAC	Northern property boundary	29	75	25	No
HVAC	Southern property boundary	24	75	20	No
HVAC	Eastern property boundary	26	75	22	No
HVAC	Western property boundary	21	75	17	No
HVAC	Nearest residence: 1,500 feet northeast	16	45	12	No
HVAC	Residence 3,000 feet southwest	9	45	5	No
HVAC	ST2	6	45	2	No
HVAC	ST3	11	45	7	No

Source: Appendix E.

Notes: dBA = A-weighted decibel; L_{eq} = equivalent noise level; CNEL = community noise equivalent level; HVAC = heating, ventilation, and air conditioning.

¹ Assumes 8 a.m. to 5 p.m. operation of an air conditioning unit for office occupancy.

The results of the mechanical equipment operations noise analysis indicate that the Project would comply with the County and City of Tracy Municipal Code and Noise Element policy criteria.

Parking Lot Activity

A comprehensive study of noise levels associated with surface parking lots was published in the Journal of Environmental Engineering and Landscape Management (Baltrėnas et al. 2004). The authors of the study found that average noise levels during the peak period of use of a parking lot (generally in the morning with arrival of commuters and in the evening with the departure of commuters) were 47 dBA at 1 meter (3.28 feet) from the outside boundary of the parking lot. The parking area would function as a point source for noise, which means that noise would attenuate at a rate of 6 dB with each doubling of distance. The employee parking areas are proposed to be situated along the sides of the warehouse buildings, no closer than 1,600 feet from the nearest noise-sensitive land use (a residence). At a distance of 1,600 feet, parking lot noise levels would effectively be 0 dBA L_{eq} . Therefore, noise from parking lot activity would be inaudible and would not contribute to the mechanical (HVAC) noise.

Truck Loading Dock Activity

Noise levels associated with cargo truck delivery activity were also examined in the parking lot study (Baltrėnas et al. 2004). The authors of the study concluded that average noise levels from truck loading/unloading areas were 96 dBA at 1 meter (3.28 feet) from the boundary of the truck activity area. Truck loading docks would not be located closer than 1,800 feet from the nearest noise-sensitive land use (a residence). Using the outdoor attenuation rate of 6 dB with each doubling of distance, truck loading activity along the western property boundary would average 41 dBA L_{eq} . The building configurations would be such that truck loading docks would be interior to the Project site, not facing outward toward noise-sensitive receivers. Substantial acoustical shielding would thus be provided by the approximately 45-foot-high building structures. The resultant loading dock noise at the nearest noise-sensitive land use would be approximately 16 dBA L_{eq} . Similarly, the loading dock noise from the other warehouse buildings would be substantially shielded from the other, more distant receivers to the southwest, east, and west. Consequently, noise generated by truck loading operations would be well below the 50 dBA L_{eq} daytime or the 45 dBA L_{eq} nighttime thresholds set forth by the County.

If the loading dock average noise levels were to occur continually throughout a 24-hour day/evening/nighttime cycle, the loading dock noise level would be approximately 23 dBA CNEL at the nearest noise-sensitive land use. The Project would have operational noise levels well below the existing CNEL noise levels based on the traffic noise model results (Table 4.6-7) as well as extrapolating from the short-term ambient noise level measurements (Table 4.6-1). In addition, the operational noise would be well below the existing ambient noise levels in the Project area, and the Project's contribution to the noise environment would be negligible. Operational noise levels from parking lot activity and HVAC operation (combined) would be well below City of Tracy noise thresholds. Therefore, on-site operational noise levels would be less than significant.

Threshold B: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Less-Than-Significant Impact. Construction activity may generate vibration that could cause annoyance to people in the Project vicinity and/or have the potential to damage nearby buildings. Construction activities can generate varying degrees of groundborne vibration, depending on the construction procedures and the type of construction equipment operated. Construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effects on buildings (i.e., building damage) are dependent on the location of the buildings to the source and the characteristic of the building structure.

During construction, heavier pieces of construction equipment used at the Project site would include dozers, graders, backhoes, concrete saws, loaders, cranes, loaded trucks, and fork lifts. Groundborne vibration is typically attenuated over short distances. Based on the distance from the construction site boundary to the nearest noise- and vibration-sensitive receptors (a residence located to the northwest) of 1,500 feet, the vibration level is estimated to be approximately 0.0002 PPV inches per second or approximately 34 VdB (FTA 2018), which would be well below the threshold of significance of 0.5 inches per second for building damage; it would also fall well below the FTA's 75 VdB threshold for potential annoyance. Consequently, temporary vibration impacts from construction would be less than significant.

Vibration during operation would be negligible. Any mechanical machinery that would generate groundborne vibration of consequence would be mounted using springs or resilient fasteners, per standard construction and installation practices, and would thus not transmit significant vibration levels into the structure and ultimately the nearby ground. Therefore, operational vibration impacts would be less than significant.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

Less-Than-Significant Impact. The Project would not result in the generation of cumulatively considerable noise impacts.

Non-transportation noise sources (e.g., Project operation) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). Construction activities associated with proposed or future development within the area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. Furthermore, all proposed or future projects would be required to adhere to applicable County and City of Tracy regulations regarding construction and operational noise. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. However, such sources do not significantly contribute to cumulative noise impacts at distant locations, and so were not evaluated on a cumulative level.

The transportation analysis for the Project considered cumulative growth. As shown in Table 4.6-9, the Project's contribution to cumulative traffic-related noise impacts would not result in a significant noise level increase along adjacent roadways. Therefore, impacts would not be cumulatively considerable and would be less than significant.

Table 4.6-9. Cumulative Traffic Noise

Modeled Receptor	Cumulative (dBA CNEL/L _{dn})	Cumulative with Project (dBA CNEL/L _{dn})	Difference (dB)
ST1: West of Project site, adjacent to CAL FIRE Station 26 at 16502 West Schulte Road	66	66	0
ST2: West of Project site, adjacent to residence at 25730 Hansen Road	55	55	0
ST3: East of Project site, adjacent to residence at 25613 South Lammers Road	60	60	0
ST4: East of Project site, adjacent to residence at 25700 South Lammers Road	59	59	0
ST5: Northwest of Project site, adjacent to residence at 24142 Hansen Road	64	64	0
ST6: West of Project site, adjacent to residence at 24365 Mountain House Parkway	62	62	0

Source: Appendix E-3.

Notes: dBA = A-weighted decibel; CNEL = community noise equivalent level; L_{dn} = day night average sound level; dB = decibel.

4.6.5 Mitigation Measures

No mitigation measures are required.

4.6.6 Level of Significance After Mitigation

Threshold A: Would the Project result in 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?

The Project would result in **less-than-significant impacts** with regard to construction and operational noise. No mitigation is required.

Threshold B: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

The Project would result in **less-than-significant impacts** with regard to groundborne vibration and groundborne noise levels. No mitigation is required.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

The Project would result in **less-than-significant impacts** with regard to cumulative noise impacts. No mitigation is required.

4.6.7 References Cited

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4.7 Transportation

This section describes the existing transportation conditions of the 14800 W. Schulte Road Logistics Center (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction), the following analysis is based, in part, on the Traffic Impact Analysis (TIA) prepared by Advanced Mobility Group (December 2020) found in Appendix F of this Draft Environmental Impact Report (EIR).

4.7.1 Existing Conditions

The approximately 37.96-acre Project site was formerly used as a biomass energy facility that was decommissioned and demolished in 2019 and is now currently vacant. This section describes the existing transportation network in the vicinity of the Project site, including the roadway, transit, pedestrian, and bicycle systems.

Existing Street System

Regional access to the Project site is provided by Interstate (I) 580 and I-205, located approximately 1.5 miles southwest and north, respectively and, Interstate 5 (I-5) located approximately 8 miles east. Local access would be primarily provided by Lammers Road, Valpico Road, and Corral Hollow Road to the east; Hansen Road and International Parkway to the west; and Schulte Road immediately north of the Project site. The following is a description of the existing street system in the vicinity of the Project site (see also Appendix F).

Interstate 580 provides the most direct regional access to the Project site via full-access interchanges at International Parkway. I-580 also provides access west to the Bay Area (via the Altamont Pass) and connects to I-5 south of the City of Tracy (City). Within the City it is a four-lane freeway with a 70-mile-per-hour (mph) posted speed limit.

International Parkway is a north/south arterial that runs from I-580 in the south and connects to I-205 in the north. It is generally a four-lane roadway from Schulte Road as it crosses the Delta Mendota Canal and connects to the I-580 ramps. Based on the City of Tracy's Code of Ordinances (Chapter 3.08, Traffic Regulations), the speed limit from Berkeley Road to I-205 is 45 mph. Based on field review, all signage has been removed due to construction, and the posted speed limit from Schulte Road to Berkeley Road is signed 40 mph.

Schulte Road is a discontinuous roadway extending from Mountain House Parkway to Chrisman Road. For a short segment of the roadway (east of Mountain House Parkway and adjacent to the Safeway Warehouse Terminal), Schulte Road is a five-lane truck route. East of this segment, Schulte Road narrows to two travel lanes. Schulte Road terminates at the intersection with Lammers Road. The roadway starts again at Corral Hollow Road, approximately 0.25 miles south of its westerly segment. From Lammers Road to Corral Hollow Road, it is a two-lane undivided roadway. The posted speed limit on Schulte Road is 40 mph near International Parkway and 50 mph east of Hansen Road to the City limit.

Lammers Road is a major roadway originating 1 mile south of Valpico Road on the western boundary of the existing developed area of the City. Based on the City of Tracy's Code of Ordinances, the speed limit from Schulte Road to 11th Street is 50 mph.

Valpico Road is a continuous roadway extending from Lammers Road on the west side of the City to Chrisman Road on the east side of the City. The roadway is a two-lane undivided roadway from Lammers Road to Cagney Way, where it becomes a four-lane divided arterial up to Tracy Boulevard. Based on the City of Tracy's Code of Ordinances, the speed limit from the west City limits to Tracy Boulevard is 40 mph.

Hansen Road is a north/south divided four-lane road that connects from Schulte Road in the Project vicinity and extends to beyond I-205 to the north. Based on the City of Tracy's Code of Ordinances, the speed limit from Schulte Road to I-205 is 50 mph. The divided four-lane portion of Hansen Road north of Schulte Road was recently renamed to Iron Horse Parkway, and south of Schulte Road is still a two-lane undivided road.

Corral Hollow Road is a north/south roadway that extends from the intersection of Corral Hollow and Lammers Road, which is approximately 2 miles north of the northern City limits in a rural area, to past the I-580 ramps in the south. Based on the City of Tracy's Code of Ordinances, the speed limit from Schulte Road to 11th Street is 45 mph. Corral Hollow Road continues west past the I-580 ramps to the City of Livermore, eventually becoming Tesla Road. It is a two-lane, undivided roadway from Lammers Road to Naglee Road; a four-lane, divided roadway from Naglee Road to West Schulte Road; and a two-lane, undivided roadway from Schulte Road to the I-580 ramps.

Existing Pedestrian Facilities

Pedestrian facilities consist of crosswalks, sidewalks, pedestrian signals, off-street paths, and other facilities that provide safe and convenient routes for pedestrians to access destinations such as institutions, businesses, public transportation, and recreation facilities. In the Project vicinity, due the rural nature of the area, Schulte Road lacks sidewalks, crosswalks, and street lighting. There are no bus stops in the immediate vicinity of the Project site.

Existing Bicycle Facilities

Bicycle paths, lanes, and routes are typical examples of bicycle transportation facilities, which are defined by the California Department of Transportation (Caltrans) as being in one of the following four classes (Caltrans 2002):

- Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- Class II – Provides a designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross- flows by pedestrians and motorists permitted.
- Class III – Provides a route designated by signs or pavement markings and shared with pedestrians and motorists.
- Class IV – A separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature.

In the Project vicinity, per the adopted 2010 San Joaquin County Bicycle Master Plan, Schulte Road is an existing Class III Bike Route between Hansen Road and Lammers Road. In addition, both Hansen and Lammers Roads are shown as proposed Class III routes south of Schulte Road, and Schulte Road is proposed as a Class II Bike Lane from Hansen Road west to the old Mountain House Parkway (County of San Joaquin 2010). Due to the City of Tracy's annexations since the 2010 Bicycle Master Plan's adoption, some of the County of San Joaquin (County) proposed routes may have been superseded by planned bike facilities in the Cordes Ranch Specific Plan.

Existing Transit Facilities

There is no transit service within the Project vicinity. The nearest transit service is provided by Tracer, the City's bus service. Tracer provides seven bus routes throughout the City, with the nearest bus stops approximately 2 miles northeast at the intersection of Lammers Road with 11th Street, serving Routes D and Commuter Route G (City of Tracy 2020).

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

No federal transportation regulations apply to the Project.

State

Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the California Environmental Quality Act (CEQA) process for several categories of development projects, including the development of infill projects in transit-priority areas, and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit Oriented Infill Projects, to the CEQA Statute (California Public Resources Code [PRC] Section 21099). PRC Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit-priority area are not to be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation must be developed to replace the use of level of service (LOS) in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity, such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation, such as biking and walking. SB 743 directed the Governor's Office of Planning and Research (OPR) to develop an alternative metric for analyzing transportation impacts in CEQA documents. The alternative needed to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution; promote the development of a multimodal transportation system; and provide clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis would shift from vehicle delay to vehicle miles traveled (VMT) within transit-priority areas (i.e., areas well-served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts for all projects. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA to provide guidance on VMT analysis. In this Technical Advisory, OPR provides recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for particular jurisdictions. Although OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance ...

recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence” (CEQA Guidelines Section 15064.7[c]). In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project’s transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions, as follows:

- (1) **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- (2) **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
- (3) **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
- (4) **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

The OPR’s regulatory text indicated that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. However, the OPR Technical Advisory allows local agencies to retain their congestion-based LOS standards in General Plans and for project planning purposes. The County has not adopted VMT analysis thresholds; therefore, use of both LOS and VMT is provided in this analysis for different purposes. The Project’s LOS effects related to the County’s Development Title standards have been documented in the TIA prepared for the Project (Appendix F) for informational purposes and to evaluate potential safety impacts associated with vehicle stacking resulting from potential delay. Additionally, a VMT analysis has been provided directly in this Draft EIR, which relies on VMT as the basis for evaluating transportation impacts under CEQA.

California Department of Transportation

As the owner and operator of the State Highway System, Caltrans implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local

jurisdictions when proposed local land use planning and development may impact state highway facilities. To comply with SB 743, the Caltrans Transportation Impact Study Guide (Caltrans 2020a) replaced the Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Per the 2020 Transportation Impact Study Guide, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses. Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018). In addition to VMT, Caltrans has developed an Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance, which may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System (Caltrans 2020b).

Regional

County of San Joaquin General Plan

As required by SB 743, the LOS and delay impact metric has been replaced by the VMT metric in the determination of transportation impacts. Therefore, LOS goals and policies of the respective affected jurisdictions are not assessed in this CEQA document. The LOS analysis contained in the TIA (Appendix F) has been prepared for use by the County for informational purposes. The County of San Joaquin General Plan contains the following goals and policies applicable to transportation and the Project (County of San Joaquin 2016).

Public Facilities and Services Element – Transportation and Mobility Section

Goal TM-3 To maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.

Policy TM-3.2 Urban Roadways. The County shall require, where feasible, new development in Urban Communities to construction roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Bike lanes shall be required where feasible, for improvements identified in the San Joaquin County Bicycle Master Plan.

Policy TM-3.3 Onsite Circulation Systems. The County shall require new development to design on-site circulation systems and parking facilities to minimize backup on County roadways.

Goal TM-4 To maintain and expand a safe, continuous, and convenient bicycle system and pedestrian network.

Policy TM-4.12 Sidewalk Design. The County shall require that sidewalks in Urban Communities and City Fringe Areas be developed at sufficient width to accommodate pedestrians in accordance with the American with Disabilities Act.

Local

City of Tracy General Plan

As noted above, the LOS and delay impact metric has been replaced by the VMT metric in the determination of transportation impacts. Therefore, LOS goals and policies of the respective affected jurisdictions are not assessed in this CEQA document. The LOS analysis contained in the TIA (Appendix F) has been prepared for use by the City for informational purposes. The City of Tracy General Plan contains the following goals and policies applicable to transportation and the Project (City of Tracy 2011).

Circulation Element

Objective CIR 1.1 Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.

Policy P3. The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.

Policy P4. The City shall continue to participate in regional transportation funding decision, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.

Objective CIR-1.4 Protect residential areas from commercial truck traffic.

Policy P1. Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if a project would:

- A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- D. Result in inadequate emergency access.
- E. Result in cumulatively considerable transportation impacts.

The following discusses specific significance criteria associated with the thresholds listed above.

Program, Plan, Ordinance, and Policy

The relevant plans, policies, and ordinances listed in Section 4.7.2 were analyzed for their applicability to the Project under Threshold A.

Vehicle Miles Traveled

The CEQA Guidelines state that “generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts” and define VMT as “the amount and distance of automobile travel attributable to a project.” “Automobile” refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of a project on transit and non-motorized travel.

OPR provides the following screening guidance to determine if a project should be expected to cause a less-than-significant impact (OPR 2018):

- **Screening Threshold for Small Projects:** Projects that generate or attract fewer than 110 trips per day and are consistent with a Sustainable Communities Strategy (SCS) or general plan.
- **Map-Based Screening for Residential and Office Projects:** Projects located in areas with low VMT that incorporate similar features (i.e., density, mix of uses, transit accessibility).
- **Presumption of Less Than Significant Impact Near Transit Stations:** Certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop¹ or an existing stop along a high quality transit corridor² will have a less-than-significant impact on VMT. This presumption would not apply, if the project:
 - Has a Floor Area Ratio (FAR) of less than 0.75
 - Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
 - Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
 - Replaces affordable residential units with a smaller number of moderate- or high-income residential units
- **Presumption of Less Than Significant Impact for Affordable Residential Development:** A project consisting of a high percentage of affordable housing may be basis for the lead agency to find a less-than-significant impact on VMT.
- **Presumption of Less Than Significant Impact for Local Serving Retail:** Locally serving retail projects, less than 50,000 square feet.

If a project does not meet the above screening criteria, consistent with the OPR guidelines (OPR 2018) and CEQA Guidelines Section 15064.3(b), the following specific VMT metrics are recommended to complete a VMT impact assessment:

- **Residential Projects:** VMT per resident for all home-based trips.
- **Employment Projects:** VMT per employee for only the home-based-work trip purpose and would apply to office, industrial, and institutional projects.
- **Regional Retail (>50,000 square feet):** Total VMT per service population for trips taken by both workers and visitors.
- **Mixed-Use:** Total VMT per service population.
- **Other:** Total VMT per service population for trips taken by both workers and visitors.

The County does not have established VMT thresholds; however, a draft of the County’s VMT Thresholds Study recommends a similar approach to that provided in the OPR Technical Advisory (County of San Joaquin 2020a). OPR recommends a 15% reduction from baseline VMT per capita or per employee for residential and work projects,

¹ PRC Section 21064.3: “‘Major transit stop’ means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”

² PRC Section 21155: “For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.”

respectively (OPR 2018). The Project is a warehouse land use and is considered an employment project. Therefore, home-based work (HBW) VMT per employee metric was used in the assessment of VMT impacts.

The San Joaquin Council of Governments (SJCOG) Regional Travel Demand Model (RTDM) was updated in December 2019, with a base year of 2015 and a forecast year of 2045. HBW vehicular trips were selected for evaluation in the County’s VMT Threshold Study to estimate trips associated with work VMT and estimate an average HBW VMT per employee (County of San Joaquin 2020a). The VMT Thresholds Study recommends 16.19 VMT per employee as a threshold for VMT impacts, 15% below the County’s average HBW VMT per employee.

Although the VMT trips evaluated in the SJCOG RTDM would not be expected to change because baseline model data is static, the California Statewide Travel Demand Model (CSTDM) was also used in this analysis because the County’s VMT Threshold Study has not yet been adopted. The CSTDM is a statewide model; therefore, it contains larger traffic analysis zones (TAZs) compared to regional models and provides a high-level VMT analysis. The CSTDM has a base year of 2010, with a forecast year of 2040. Based on data provided in the CSTDM for the County, 15% below the County average home-based work VMT per employee is 12.27.

The Project would be considered to have a significant impact if the Project VMT per employee is greater than 16.19 per the SJCOG RTDM, and 12.27 per the CSTDM. Table 4.7-1 summarizes VMT per-employee thresholds from both models.

Table 4.7-1. VMT Threshold Summary

	SJCOG RTDM ¹	CSTDM ²
	<i>VMT per Employee</i>	
Regional Average (San Joaquin County)	19.05	14.43
15% below San Joaquin County	16.19	12.27

Notes: VMT = vehicle miles traveled; SJCOG = San Joaquin Council of Governments; RTDM = Regional Travel Demand Model; CSTDM = California State Transportation Demand Model.

¹ Figure A.7 of the Draft County of San Joaquin VMT Thresholds Study (County of San Joaquin 2020a)

² CSTDM TAZ excel spreadsheet (Caltrans 2015)

The Project’s VMT analysis is provided under Threshold B.

Hazardous Features (Project Access)

The analysis evaluates whether the Project would result in hazards due to design features by determining appropriate acceleration and deceleration lane lengths, analyzing proximity of Project driveways to other driveways, driveway throat depths, and truck access. A significant impact would occur if truck traffic would not be able to navigate the site due to insufficient driveway widths or curb radii, locations of Project driveways would interfere with nearby driveways, or if vehicle queueing would impact on- or off-site vehicle operations.

Emergency Access

The emergency access analysis evaluated whether the Project would comply with the County’s emergency access and/or evacuation requirements, including those imposed by the fire department. A significant impact would occur if the Project would not comply with Section 503.1 of the California Fire Code and the San Joaquin County Fire Chiefs Association’s Fire Access Road Standards such that emergency vehicles would not be able to access the Project site,

4.7.4 Impacts Analysis

Threshold A: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less-Than-Significant Impact. As discussed below, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

As required by SB 743, the LOS and delay impact metric has been replaced by the VMT metric in the determination of transportation impacts. Therefore, LOS goals and policies of the affected jurisdictions are not assessed in this CEQA document. The LOS analysis contained in the TIA (Appendix F) was prepared for use by the City of Tracy and the County for informational purposes only. The following are the programs, plans, ordinances, or policies that are pertinent to the Project (County of San Joaquin 2016; City of Tracy 2011).

County of San Joaquin Public Facilities and Services Element – Transportation and Mobility Section

Goal TM-3 To maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.

Policy TM-3.2 Urban Roadways. The County shall require, where feasible, new development in Urban Communities to construction roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Bike lanes shall be required where feasible, for improvements identified in the San Joaquin County Bicycle Master Plan.

The Project would involve construction of roadway improvements consistent with County standards and complete streets principles, including curb, gutter, and sidewalks along the Project frontage. Additionally, no improvements to bicycle facilities are noted along Schulte Road, which is currently designated as a Class III Bike Route between Hansen Road and Lammers Road. The Project would not impact the existing Class III bicycle facilities.

Policy TM-3.3 Onsite Circulation Systems. The County shall require new development to design on-site circulation systems and parking facilities to minimize backup on County roadways.

The Project would involve street improvements on Schulte Road, including the addition of a right-turn lane on eastbound Schulte Road for both driveways, addition of westbound left-turn lanes along Schulte Road for both driveways, and widening a portion of westbound Schulte Road. These measures would facilitate adequate on-site circulation and sufficient site access for passenger vehicles and trucks and would ensure efficient off-site circulation on nearby roadway facilities to minimize backup on County roadways, consistent with County General Plan Policy TM-3.3. Further discussion is provided under Threshold C.

Goal TM-4 To maintain and expand a safe, continuous, and convenient bicycle system and pedestrian network.

Policy TM-4.12 Sidewalk Design. The County shall require that sidewalks in Urban Communities and City Fringe Areas be developed at sufficient width to accommodate pedestrians in accordance with the American with Disabilities Act.

The Project would involve construction of sidewalks along the Project frontage, which would be developed to accommodate pedestrians in accordance with the Americans with Disabilities Act, consistent with County General Plan Policy TM-4.12.

City of Tracy Circulation Element

Objective CIR 1.1 Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.

Policy P3 The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.

Policy P4 The City shall continue to participate in regional transportation funding decision, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.

The TIA (Appendix F) provides a Project fair-share analysis for several study intersections warranting improvements. Fair-share calculations are based on Caltrans and County of San Joaquin Traffic Impact Study guidance, and cost estimates are based on roadway improvements assumed under the City of Tracy Transportation Master Plan. Fair-share contributions from the Project applicant would be required by the City, consistent with City General Plan CIR 1.1, Policies P3 and P4 (City of Tracy 2011).

Objective CIR-1.4 Protect residential areas from commercial truck traffic.

Policy P1 Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.

The Project truck distribution patterns identified in the TIA show all Project truck traffic routed to the west of the Project site, with no truck traffic routed east into the City. Truck routes are not identified by the City adjacent to or near the Project site; however, truck traffic would be limited to industrial areas, consistent with City General Plan CIR-1.4, Policy P1 (City of Tracy 2011).

Therefore, as discussed above, the Project would be consistent with applicable policies of the County's General Plan Public Facilities and Services Element – Transportation and Mobility Section and the City of Tracy's General Plan Circulation Element. Further discussion of policies related to transit, bicycle, and pedestrian facilities are provided below.

Transit, Bicycle, and Pedestrian Facilities

As discussed in Section 4.7.1, there is currently no transit service to the Project site. The Project would result in an increase in population and employment in the County, increasing the number of people who may use public transit services. However, the Project site is not directly served by any transit routes. Transit service is provided by Tracer, with the nearest bus stops approximately 2 miles northeast at the intersection of Lammers Road with 11th Street, serving Routes D and Commuter Route G (City of Tracy 2020). No public transit facilities or services are planned for the Project vicinity.

Schulte Road, adjacent to the northern boundary of the Project site, includes an existing Class III Bike Route from Hansen Road to Lammers Road. Additionally, Hansen and Lammers Roads are identified as proposed Class III routes south of Schulte Road, and Schulte Road was proposed as a Class II Bike Lane from Hansen Road west to the old Mountain House Parkway, per the 2010 County Bicycle Master Plan (County of San Joaquin 2010). However, the Draft San Joaquin County Bicycle Master Plan Update, released in October 2020, does not identify this Class II facility along Schulte Road (County of San Joaquin 2020b). No bicycle facilities are proposed along Schulte Road per the Bicycle Master Plan Update, except for the existing Class III Bike Route noted above.

There are few existing pedestrian facilities within the Project vicinity. The adjacent development at 14900 W. Schulte Road includes some sidewalk and pedestrian facilities; however, due to the lack of connectivity and significant development in the immediate Project vicinity, pedestrian activity is very light at present. The Cordes Ranch Specific Plan includes proposed pedestrian sidewalks along the north side of Schulte Road (City of Tracy 2018).

Consistent with County General Plan Policy TM-3.2, the Project would be expected to construct roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Additionally, sufficient right-of-way would be provided to accommodate the existing Class III Bike Route along Schulte Road. Pedestrian sidewalks, crosswalks, and accessible paths of travel would be provided within the Project site in accordance with the Americans with Disabilities Act per TM-4.12 of the County’s General Plan Public Facilities and Services Element – Transportation and Mobility Section (County of San Joaquin 2016).

The Project would not disrupt or interfere with existing or planned bicycle or pedestrian facilities, conflict with adopted pedestrian or bicycle system plans or policies, create a substantial demand for mass transit services above existing or planned capacity, or interfere with existing or planned transit facilities. Therefore, impacts would be less than significant.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less-Than-Significant Impact. The OPR Technical Advisory states that agencies may screen out VMT impacts using a project’s size, maps, transit availability, and provision of affordable housing (OPR 2018). Additionally, the County’s Draft VMT Thresholds Study recommends adoption of all screening criteria recommended by OPR, with exception of the low-income-housing screening threshold (County of San Joaquin 2020a).

- **Screening Threshold for Small Projects (110 daily trips or less):** The TIA included in Appendix F estimates that the Project would generate approximately 117 trips (170 passenger-car-equivalent trips) during the AM peak hour and 130 trips (174 passenger-car-equivalent trips) during the PM peak hour. Because the Project would generate 117 AM peak-hour and 130 PM peak-hour trips, daily trips would exceed 110 trips per day; therefore, it cannot be assumed to cause a less-than-significant transportation impact under this criterion.
- **Map Based Screening for Residential and Office Projects:** As previously discussed, the County has not adopted VMT screening thresholds; however, the County’s Draft VMT Thresholds Study provides preliminary screening maps based on data from the SJCOG RTDM. Figure 4.7-1 shows the Southwest County Work Screening Map by TAZ included in the County’s Draft VMT Thresholds Study.

Additionally, as discussed in Section 4.7.3, Thresholds of Significance, the CSTDM is also used in this analysis. Figure 4.7-2 shows the low VMT TAZs derived from CSTDM excel spreadsheets (Caltrans 2015).

Table 4.7-2 identifies low VMT per employee TAZs in San Joaquin County per the CSTDM and SJCOG RTDM.

Table 4.7-2. VMT Screening Summary

	SJCOG RTDM ¹	CSTDM ²
	<i>VMT per Employee</i>	
Regional Average (San Joaquin County)	19.05	14.43
15% below San Joaquin County	16.19	12.27
Project TAZ	.3	11.48

Notes: VMT = vehicle miles traveled; SJCOG = San Joaquin Council of Governments; RTDM = Regional Travel Demand Model; CSTDM = California State Transportation Demand Model; TAZ = transportation analysis zone.

- ¹ Figure A.7 of the Draft County of San Joaquin VMT Thresholds Study (County of San Joaquin 2020a).
- ² CSTDM TAZ excel spreadsheet (Caltrans 2015).
- ³ Specific VMT per employee data by TAZ is not identified in the County's Draft VMT Thresholds Study. Figure 4.7-1 provided in this document shows the low VMT generating areas by TAZ (Figure A.7 of the VMT Thresholds Study).

As shown in Table 4.7-2 and Figures 4.7-1 and 4.7-2, the Project can be screened out from further VMT analysis based on this criterium. The Project would be located in TAZs with HBW VMT per employee that is 15% below the baseline VMT. Both the SJCOG RTDM and CSTDM support this determination.

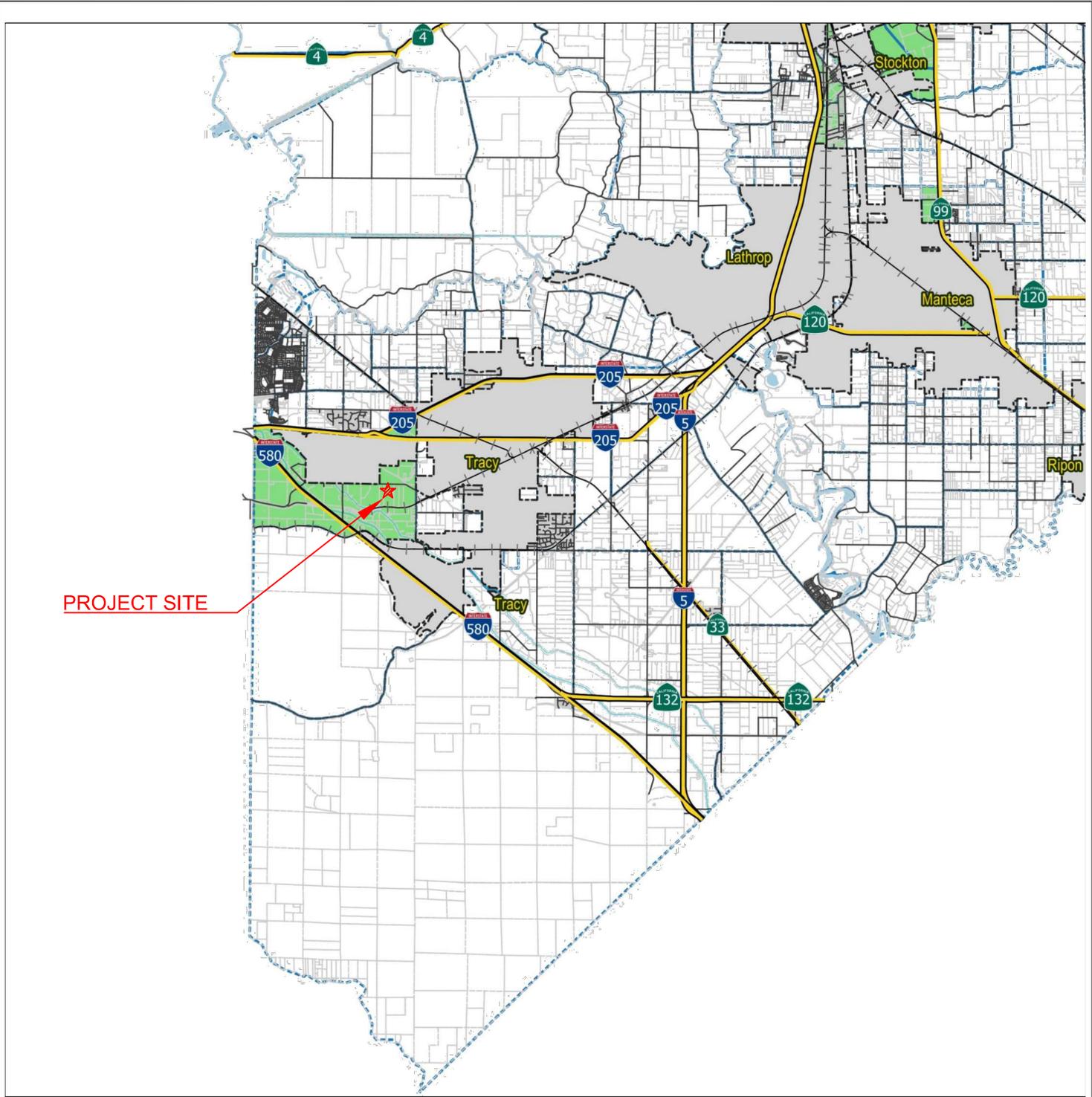
- **Presumption of Less Than Significant Impact Near Transit Stations:** As discussed in Section 4.7.1, the nearest transit service is provided by Tracer, the City's bus service. Tracer provides seven bus routes throughout the City, with the nearest bus stops approximately 2 miles northeast at the intersection of Lammers Road with 11th Street, serving Routes D and Commuter Route G (City of Tracy 2020). Therefore, the Project site is not located within 0.5 miles of high-quality transit corridor and cannot be screened using the proximity to transit availability criteria.
- **Presumption of Less Than Significant Impact for Affordable Residential Development:** The Project does not propose affordable residential units and is not a residential development.
- **Presumption of Less Than Significant Impact for Local Serving Retail:** For development projects, if the project leads to a net increase in provision of locally serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. Generally, local-serving retail less than 50,000 square feet can be assumed to cause a less-than-significant transportation impact. The Project is not considered a retail project; therefore, it cannot be screened out using this criterion.

Because the Project can be screened out from further VMT analysis based on its location in a low VMT-generating TAZ, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and transportation impacts under CEQA would be less than significant.

Threshold C: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less-than-Significant with Mitigation Incorporated. The Project would result in new roadway and intersection improvements to facilitate local circulation and would have potentially significant impacts. However, as discussed below, the Project would result in less-than-significant impacts with implementation of Mitigation Measure (MM) TRAF-1. Additionally, the Project would not increase hazards due to the introduction of a use that is incompatible with existing uses.

Jan 25, 2024 - 5:27 pm - amonou - P:\001_Environmental\15267_14800_Schulte_Road_Logistics_Center_Work_Products\11_Technical Studies\Traffic_Dudek\CAD_Schulte.dwg - Layout: 8.3x11



SOUTHWEST COUNTY VIEW

Work baseline VMT per Employee = 19.05
 Threshold of 15% below baseline = 16.19

Legend

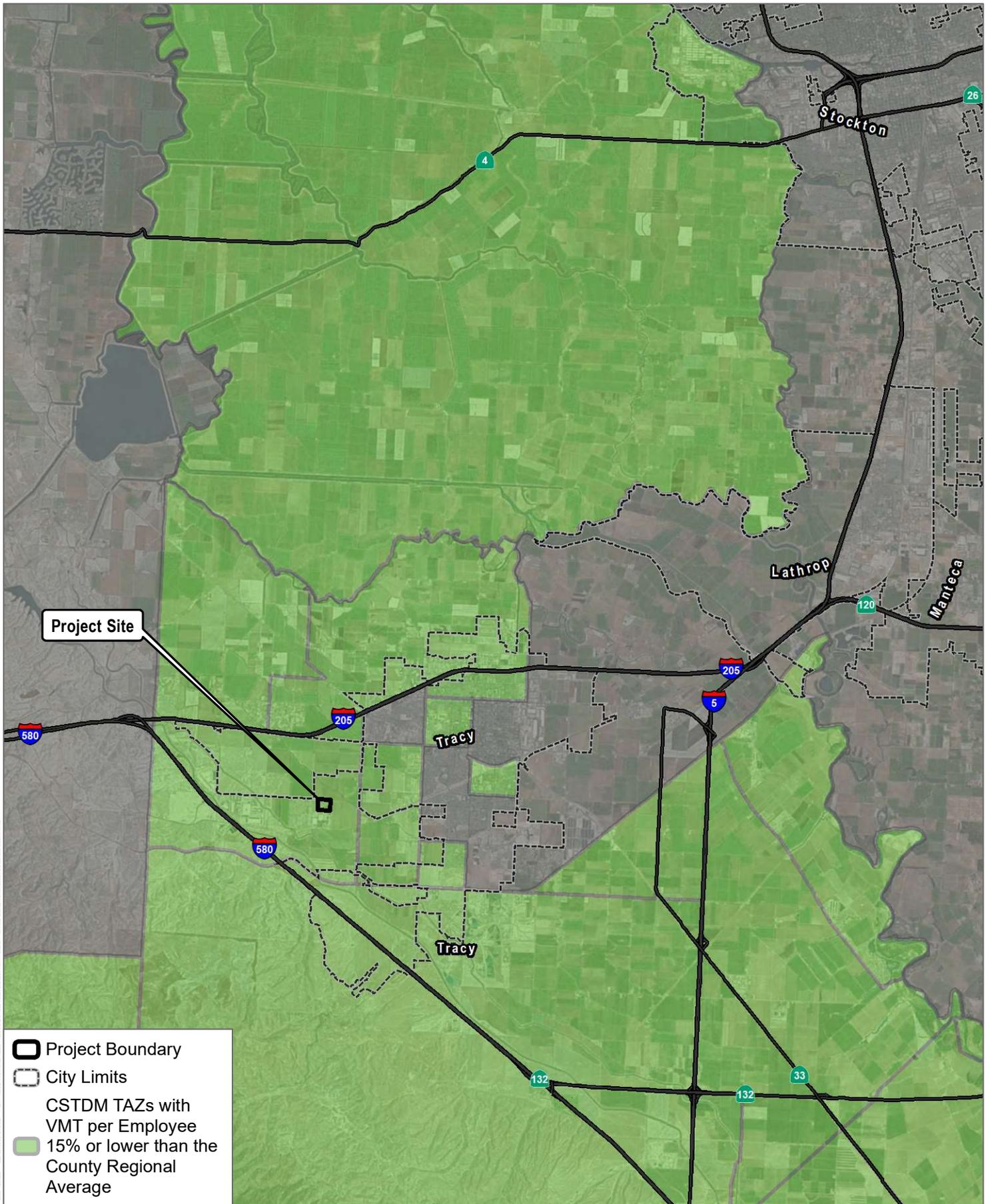
- Streets
- Railroads
- Highways
- ▭ City Limits
- ▭ TAZ's - San Joaquin County
- ▭ Parcels
- Waterways
- Canal
- Lake or River
- Work Screening
- 15% or lower than the Unincorporated Regional Average

SOURCE: Draft VMT Thresholds Study (County of San Joaquin 2020)

Figure 4.7-1

San Joaquin County Work Screening Map by TAZ

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SOURCE: Bing Imagery (Accessed 2020), CSTDM (Caltrans 2015)

Figure 4.7-2

CSTDM Low VMT Map

14800 W. Schulte Road Logistics Center Project

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Single-loaded truck bays would be located on the south and north sides of Buildings A and B and on the west side of Building C. Building A would provide 42 loading docks, Building B would provide 43 loading docks, and Building C would provide 30 loading docks. Paved passenger vehicle parking areas would be provided along the northern and southeastern portions of the Project site near the frontage of Schulte Road and Quality Road. Truck/trailer parking would be provided in between Buildings A and B. Gated entry is proposed at key dock access routes for each building. In total, the Project site would include 111 stalls for trailers and 522 standard parking spaces for passenger vehicles and trailers. In addition, the Project would include internal drive aisles to facilitate on-site circulation. Access to the Project site would be provided via two driveways:

- Driveway 1 on Schulte Road – 30-foot-wide, full-access (passenger cars only) driveway
- Driveway 2 on Schulte Road – 50-foot-wide, full-access (passenger cars and trucks) driveway

Internal Circulation

The TIA (Appendix F) analyzed driveway throat lengths to determine availability of storage capacity within the Project site such that vehicles would not queue into internal intersections, along with adequacy of internal access road widths and circulation.

The throat of the truck entrance from the first internal intersection is approximately 150 feet, which would accommodate one to two trucks. Additionally, a wide truck access aisle is provided for truck access to 42 truck docks to Building A and 43 truck docks to Building B. The passenger car entrance, located approximately 600 feet west of the truck entrance, would also provide a throat length of 150 feet, which would accommodate approximately six vehicles. Internal access roads of 26 feet wide would provide access to the three buildings, as shown in Figure 3-4, Site Plan, in Chapter 3, Project Description. Throat distances and internal access road widths are considered acceptable for this land use and would not result in hazardous design features. Impacts would be less than significant.

Street Improvements

To facilitate adequate on-site circulation and sufficient site access both passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities, the Project would involve street improvements on Schulte Road, including adding a right-turn lane on eastbound Schulte Road for both driveways and widening a portion of westbound Schulte Road. These improvements would be constructed to accommodate the future build-out condition of Schulte Road.

The TIA (Appendix F) also recommends addition of a westbound left-turn deceleration lane for both driveways to safely accommodate turning movements into the site along Schulte Road, which currently operates with an adopted posted speed of 50 mph and design speed of 60 mph. The Caltrans Highway Design Manual recommends 530 feet of deceleration length for a design speed of 60 mph, with the addition of storage length for two waiting vehicles (Caltrans 2019). The TIA recommends a storage length of 90 feet for two waiting vehicles (including one truck and one passenger vehicle), and a 90-foot taper (Appendix F); therefore, the total length of the left-turn lane and its bay taper would range from 535 to 770 feet. As noted in a memorandum from the County of San Joaquin to the City of Tracy, dated December 15, 2020, any specifics to queue lengths will be added as a requirement to the County's Conditions of Approval to be determined and reviewed at the time of Plan Check and prior to the issuance of an encroachment permit (County of San Joaquin 2020c).

Additionally, per the December 15, 2020, memorandum, the County will require the Project applicant to modify the site plan to meet City driveways standards in one of the two following ways:

- Move western driveway approximately 160 feet to the east to provide the minimum recommended distance of 500 feet from the 14900 Schulte Road driveway if full access is to be maintained, or
- If the western driveway remains less than 500 feet from the 14900 Schulte Road driveway, driveway will be restricted to right-in/right-out access only.

Per the County's requirements, with implementation of MM-TRAF-1, the Project would not incorporate design features that would increase hazards, and impacts associated with site access would be less than significant.

Incompatible Uses

The Project site is located within an agricultural area that is transitioning to one that is primarily industrial, and farm equipment may operate on Project-area roadways. However, although farm equipment may operate on these roadways, the Project's traffic would use designated truck routes and operate in other industrial areas. Additionally, operators of farm equipment would be required to comply with regulations and equipment restrictions of the roadways. Therefore, the Project would not increase hazards due to the introduction of a use that is incompatible with existing uses, and impacts would be less than significant.

Overall, with implementation of MM-TRAF-1, the Project would result in less-than-significant impacts related to Threshold C.

Threshold D: Would the Project result in inadequate emergency access?

Less-Than-Significant Impact. Site access would be provided via two driveways on Schulte Road and a 25-foot-wide driveway on Quality Drive. Emergency vehicle access would be available at both driveways and facilitated within the entirety of the Project site. Additionally, a 25-foot-wide driveway on Quality Drive would be reserved exclusively for emergency access. The Project site would be accessible to emergency responders during construction and operation of the Project. All emergency access roads would be constructed in compliance with Section 503.1 of the California Fire Code and the San Joaquin County Fire Chiefs Association's Fire Access Road Standards. Therefore, impacts associated with an emergency response plan or emergency evacuation plan would be less than significant.

Threshold E: Would the Project result in cumulatively considerable transportation impacts?

Less-Than-Significant Impact. Per the OPR Technical Advisory, "a project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa" (OPR 2018). Based on the VMT analysis provided under Threshold B, because the Project would be screened out from further VMT analysis based on its location in a low VMT-generating TAZ, it would have a less-than-significant cumulative impact to VMT and would not result in cumulatively considerable transportation impacts.

4.7.5 Mitigation Measures

MM-TRAF-1 The Project would require one of the two following improvements to mitigate impacts to site access, consistent with County of San Joaquin requirements to adhere to City of Tracy driveway standards:

- Move western driveway approximately 160 feet to the east to provide the minimum recommended distance of 500 feet from the 14900 Schulte Road driveway if full access is to be maintained, or
- If the western driveway remains less than 500 feet from the 14900 Schulte Road driveway, driveway will be restricted to right-in/right-out access only.

4.7.6 Level of Significance After Mitigation

Threshold A: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and its impact to transportation plans and programs would be **less than significant**. No mitigation is required.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and its impact to VMT would be **less than significant**. No mitigation is required.

Threshold C: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project would include MM-TRAF-1 to facilitate on-site circulation and site access for passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities. With this mitigation measure, the Project would not substantially increase hazards due to a geometric design feature or incompatible uses, and impacts would be **less-than-significant with mitigation incorporated**.

Threshold D: Would the Project result in inadequate emergency access?

The Project would be accessible to emergency responders during construction and operation of the Project. Therefore, impacts associated with an emergency response plan or emergency evacuation plan would be **less than significant**. No mitigation is required.

Threshold E: Would the Project result in cumulatively considerable transportation impacts?

The Project would be screened out from further VMT analysis based on its location in a low VMT-generating TAZ per Threshold B. Therefore, given that a finding of a less-than-significant Project impact would imply a less-than-significant cumulative impact for VMT, the Project would have a **less-than-significant cumulative impact** with regard to VMT and would not result in cumulatively considerable transportation impacts. No mitigation is required.

4.7.7 References Cited

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4.8 Water

This section describes the existing utility conditions of the 14800 Schulte Road Industrial Park Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Draft Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- *Draft Water Source Assessment for 14800 W. Schulte Road, Tracy, CA* prepared by Schaaf & Wheeler Consulting Civil Engineers in December 2020 (Appendix G)

4.8.1 Existing Conditions

Sacramento–San Joaquin Delta

The Sacramento-San Joaquin Delta occupies the western portion of San Joaquin County (County) and represents the point of discharge for the Sacramento and San Joaquin River systems. Water flows out of the Delta, into San Francisco Bay, and through the Golden Gate to the Pacific Ocean, creating an extensive estuary where salty ocean water and fresh river water commingle. In sum, water from over 40% of the state’s land area is discharged into the Delta (USGS, 1999).

Regional Groundwater

Similar to the surface water basins, the Central Valley is divided into different groundwater basins including the Sacramento Hydrologic Region (HR), the Tulare Lake HR, and the San Joaquin River HR. The San Joaquin HR covers approximately 9.7 million acres, representing the central portion of the Central Valley. This region is bound on the north by the Delta, the east by the Sierra Nevada, the west by the Diablo Range and the south by the Tehachapi Mountains. The HR includes two entire groundwater basins (Yosemite Valley and Los Banos Creek Valley) and part of the San Joaquin Valley basin which is made up of 9 subbasins. The Eastern San Joaquin Subbasin is the largest subbasin in the county. The subbasins are recharged in the upland areas of Eastern San Joaquin County and adjacent foothill areas to the east and west, and discharge to the low-lying area of the Delta and the San Joaquin River. In general, this HR is heavily reliant on groundwater supplies and accounts for approximately 18% of statewide groundwater use for both agricultural and urban needs (DWR 2003).

The aquifers or water bearing zones within the San Joaquin River HR are generally very thick, accommodating wells as deep as 800 feet below the ground surface (DWR 2003). Aquifers include unconsolidated alluvium as well as consolidated rocks with unconfined and confined groundwater conditions. Since the beginning of agricultural development in the region, groundwater has been used in conjunction with surface water to meet water supply needs (DWR 2003). Historical groundwater use and over pumping in areas have resulted in significant land subsidence, especially in the southwest portion of the region.

The County lies within the San Joaquin HR and overlies three of the subbasins within the San Joaquin Valley groundwater basin: Eastern San Joaquin, Tracy, and Cosumnes. The Project site overlies the Tracy Subbasin.

Tracy Subbasin

The Tracy Subbasin is largely located in San Joaquin County and primarily bounded by the San Joaquin River on the north and east and the County line on the south and west. Within the Tracy Subbasin, historical groundwater levels have shown declines due to seasonal and local pumping influences. Water uses in the Subbasin include agricultural, municipal, industrial, domestic, and native vegetation and aquatic species. Some water is also being used for managed habitats, mostly for migrating birds. Some water purveyors rely exclusively on either groundwater or surface water, but most rely on a combination of surface water and groundwater.

Groundwater Quality in the Tracy Subbasin

Groundwater quality in the Tracy Subbasin is variable. Good quality water, from a salinity aspect (TDS) being below the recommended drinking water standard, is locally present in both the confined and unconfined aquifers in the southern portion of the Subbasin. In the remaining portions of the Subbasin, groundwater quality is marginal to poor due to naturally occurring high concentrations of salts from various sources and is part of the reason that the cities have obtained surface water supplies. The concentration of the other naturally occurring constituents varies widely over the Subbasin and also with depth at any given location. This may affect the supply, beneficial uses, and potential management of groundwater in the Subbasin. Local occurrences of PFAS, uranium, nitrates, manganese have been detected above the MCL. Although these elements and compounds may have been detected, the community water systems only supply drinking water that meets all water quality standards. When an element is detected above the MCL, the wells have been brought offline until treatment or remediation has been implemented to meet the drinking water standards.

The concentration of the naturally occurring elements varies widely over the Subbasin and also with depth at any given location. Groundwater quality in the Subbasin has locally exceeded the maximum contaminant levels (MCL) for drinking water for specific elements, some exceedances are scattered and some are clustered. Poor groundwater quality has been noted in the following general areas:

- Salinity, as represented by TDS, is high in both the Upper and Lower aquifers with a few areas with good quality water.
- Elevated concentrations of sulfate are present near the foothills in both the Upper and Lower aquifers potentially as a result of recharge water originating from the Coast Ranges.
- Elevated concentrations of arsenic are only in the Upper aquifer and within the Delta area and not in the Lower aquifer.
- Boron is present in the Upper aquifer. Most elevated concentrations are present in the non-Delta areas and in the northern portions of the Delta area.

In the Tracy Subbasin there are a few large and known groundwater contamination sites that could affect supply and beneficial uses of groundwater in the Subbasin. The most significant of these sites are former Occidental Chemical Corporation site, Sharpe Army Depot site, and the Army Tracy Depo. Cleanup activities have been in progress for multiple years and contaminants appear to be contained, although off site at some locations, based on reports submitted for regulatory purposes.

There are over 100 small sites that may present threats to local groundwater quality. These sites may have leaking underground storage tanks, improperly stored pesticides, leaking dry cleaning solvents, or other point sources of contamination. While the threat from many of these sites can be mitigated, the aggregate impact from undetected point-source contamination to groundwater quality in the basin cannot be determined.

Regional Surface Waters

The Central Valley is a very large, flat alluvial valley that dominates the central portion of California. Land use in this region includes a majority of the state's most productive agricultural operations. The valley stretches approximately 500 miles from north to south, from about 100 miles south of the Oregon border to the boundary between Kern and Los Angeles counties. The Central Valley is divided into three hydrologic regions or surface water basins including the Sacramento River Basin in the north, the San Joaquin River Basin in the center, and the Tulare Lake Basin to the very south. Together the Sacramento and San Joaquin River Basins cover about one fourth of the total areas of the state and over 30 percent of the irrigable land. The two main drainages for these valleys, the Sacramento River and the San Joaquin River, empty into the San Francisco Bay estuary system through a large expanse of interconnected canals, streambeds, sloughs, marshes and peat islands known as the Sacramento-San Joaquin Delta (Delta).

The County lies entirely within the San Joaquin River Basin which is bounded topographically and geologically by the bedrock of the Diablo Range on the west and the Sierra Nevada to the east. The San Joaquin River flows in a southeast to northwest direction from the Sierra Nevada through the county into the Delta, San Francisco Bay, and ultimately the Pacific Ocean. Both the headwaters and ultimate destination of the San Joaquin River and its tributaries are outside of the county.

4.8.2 Relevant Plans, Policies, and Ordinances

Federal

The federal Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the Clean Water Act was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

Under the Clean Water Act, the federal Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry. The federal EPA has also developed national water quality criteria recommendations for pollutants in surface waters.

The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained:

- EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.
- Point sources are discrete conveyances such as pipes or man-made ditches.
 - Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need a NPDES permit.
 - Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

State

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as SGMA. This act requires governments

and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. SGMA also allows the State to intervene and implement fees if local agencies do not satisfy certain requirements by the statutory deadlines.

SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California. Per SGMA, once adopted, a basin must be brought into sustainability (i.e., balanced levels of pumping and recharge) within 20 years. For critically over-drafted basins, GSPs were required to be adopted by January 31, 2020. For the remaining high- and medium-priority basins, GSPs must be adopted by January 31, 2022.

On February 11, 2019, DWR published the final Basin Boundary Modifications, which provided an updated delineation of the Tracy Subbasin (of which the Project site is located within) and designated it as a medium priority basin, meaning that a GSP must be adopted by January 31, 2022.

The Tracy Subbasin is managed by seven GSAs in the region, including Byron-Bethany Irrigation District, Banta-Carbona Irrigation District, City of Lathrop GSA, City of Tracy GSA, County of San Joaquin GSA, Stewart Tract GSA, and the West Side Irrigation District (Tracy GSAs 2020). Specifically, the Project site lies within the jurisdiction of the County of San Joaquin GSA.

The Tracy Subbasin GSAs (Tracy Subbasin Partners) are seeking to collectively develop a single GSP (Tracy Subbasin GSP) by using grant funding and have selected San Joaquin County as the lead agency for coordinating the Tracy Subbasin GSP development among the Tracy Subbasin Partners.

According to draft documents that will compose the Tracy Subbasin GSP, local agencies have collaboratively managed groundwater resources in the Tracy Subbasin for decades. As a result of these efforts, groundwater resources in the Tracy Subbasin are already sustainable. The Groundwater Sustainability Plan is expected to provide a roadmap to continue to the sustainability of the region's groundwater supplies.

California Statewide Groundwater Elevation Monitoring Program

On November 4, 2009, the State Legislature amended the Water Code with SBx7-6, which mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. To achieve that goal, the amendment requires collaboration between local monitoring entities and Department of Water Resources (DWR) to collect groundwater elevation data.

In accordance with this amendment to the Water Code, DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. The intent of the CASGEM program is to establish a permanent, locally managed program of regular and systematic monitoring in all of California's alluvial groundwater basins. The CASGEM program relies on the many, established local long-term groundwater monitoring and management programs. DWR's role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a readily and widely available public database.

The law anticipates that the monitoring of groundwater elevations required by the enacted legislation will be done by local entities. The law requires local entities to notify DWR in writing by January 1, 2011 if the local agency or party seeks to assume groundwater monitoring functions in accordance with the law. The legislation also requires DWR to prioritize groundwater basins to help identify, evaluate, and determine the need for additional groundwater level monitoring by considering available data. The Eastern San Joaquin basin has been identified as a high priority and the Tracy basin as a medium priority (DWR 2013).

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610-10656), urban water purveyors are required to prepare and update a UWMP every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections are required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the CDWR every five years for review and approval.

Although the Project site is not located within the City of Tracy and does not involve the use of water from the City (the Project's water would be supplied by an on-site well), the Project site is located within the City's sphere of influence (i.e., the area outside of the City limits that the City expects to annex in the future). The City of Tracy's UWMP includes plans for provision of water (including drought scenarios) for the City and its SOI. The UWMP uses regional population, land use plans, and projections of future growth as the basis of planning for future water supply and demonstrating compliance with state water conservation goals and policies. The City's UWMP was last updated in 2016 and includes projections of water demand and supply through 2040.

Although there are no immediate plans to connect the Project site to the City's water system, the Project site's general plan land use designation (Industrial) has been factored into the City of Tracy's Urban Water Management Plan to account for long-term water demand through 2040. According to the City of Tracy UWMP, the City has the supply needed to meet current and projected water demands through 2040 during normal, historic single-dry, and historic multiple-dry year periods.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record, to serve as the evidentiary basis for an approval action by the City or County on such projects. Under Water Code Section 10912[a], projects subject to the California Environmental Quality Act (CEQA) requiring a water supply assessment (WSA) include: residential development of more than 500 dwelling units; shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotel, motel or both, having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; or a project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling units. A fundamental source document for compliance with SB 610 is the UWMP. The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

Pursuant to the requirements of SB 610, a WSA was prepared for the Project and includes a comprehensive assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the City's water service area. The WSA is included as Appendix G.

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the CDWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas. New development projects that include landscape areas of 500 square feet or more are subject to the Model Water Efficient Landscape Ordinance. This applies to residential, commercial, industrial and institutional projects that require a permit, plan check or design review.

Local***San Joaquin County Ordinances for Well Use and Groundwater Management Plan Development***

The County has adopted an ordinance governing water well construction standards similar to the Department of Water Resource (DWR) requirements under Bulletin 74-81 and 74-90 (County Ordinance Code Section 9-1115.6). This ordinance documents the permit and oversight of new monitoring wells and water well construction. The ordinance governs the construction, deepening, and destruction of any well and soil boring within the unincorporated areas of the county as well as some wells in the incorporated areas. The ordinance is enforced by the San Joaquin County Environmental Health Department. Applicants must submit plan documents and obtain permits before they are allowed to complete any of the activities covered by the ordinance. Consistent with state requirements, the San Joaquin County Environmental Health Department (SJCEHD) is mandated to track water systems with fewer than 200 service connections served by wells. This program is reviewed on an annual basis by the Department of Public Health (DPH). DPH permits and tracks public water supplies with 200 or more service connections. Between the county and state programs, over 620 water sources and associated water agencies in the County are regulated, with some sources containing several wells. Many of the County Water Management Plan efforts are coordinated by the County's Department of Public Works, Water Resource Division.

County of San Joaquin General Plan

The County of San Joaquin General Plan contains the following goals and policies applicable to water supplies and quality and the Project (County of San Joaquin General Plan 2016):

Community Development Element

Goal IS-4 To ensure reliable supplies of water for unincorporated areas to meet the needs of existing and future residents and businesses, while promoting water conservation and the use of sustainable water supply sources.

Policy IS-4.3 **Water Supply Availability.** The County shall consider the availability of a long-term, reliable potable water supply as a primary factor in the planning of areas for new growth and development.

Policy IS-4.7 **Conjunctive Use.** The County shall support conjunctive use of groundwater and surface water by local water agencies to improve water supply reliability.

- Policy IS-4.8 Water Conservation Measures.** The County shall require existing and new development to incorporate all feasible water conservation measures to reduce the need for water system improvements.
- Policy IS-4.9 Groundwater Management.** The County shall continue to support cooperative, regional groundwater management planning by local water agencies, water users, and other affected parties to ensure a sustainable, adequate, safe, and economically viable groundwater supply for existing and future uses within the County.
- Policy IS-4.10 Groundwater Monitoring Program.** The County shall continue to evaluate the quantity and quality of groundwater.
- Policy IS-4.13 Water Quality Standards.** The County shall require that water supplies serving new development meet State water quality standards. If necessary, the County shall require that water be treated to meet State standards and that a water quality monitoring program be in place prior to issuance of building permits.
- Policy IS-4.15 Test Wells.** Prior to issuing building permits for new development that will rely on groundwater, the County shall require confirmation for existing wells or test wells for new wells to ensure that water quality and quantity are adequate to meet the needs of existing, proposed, and planned future development.
- Policy IS-4.18 Graywater and Rainwater Systems.** The County shall encourage homeowners, businesses, and developers to install graywater systems and rainwater harvest systems, consistent with local and State guidelines, regulations, and standards, in order to reduce consumption of potable water.

Goal IS-5 To maintain an adequate level of service in the water systems serving unincorporated areas to meet the needs of existing and future residents and businesses, while improving water system efficiency.

- Policy IS-5.1 Adequate Water Treatment and Distribution Facilities.** The County shall ensure, through the development review process, that adequate water, treatment and distribution facilities are sufficient to serve new development, and are scalable to meet capacity demands when needed. Such needs shall include capacities necessary to comply with water quality and public safety requirements.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate project impacts with regard to water are based on the portions of the hydrology and water quality and utilities and service systems sections of Appendix G of the CEQA Guidelines that pertain to water supplies. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if a project would:

- A. Not have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
- C. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
- D. Result in cumulatively considerable impacts relating to water or groundwater.

All other hydrology and water quality and utilities and service systems thresholds were analyzed in the Initial Study (Appendix A) and were not carried forward for further analysis in this EIR. See Chapter 5, Effects Found Not to Be Significant, for additional detail.

4.8.4 Impacts Analysis

Threshold A: Would there be sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact. Domestic, irrigation, and fire suppression water would be sourced on the Project site through the installation of two on-site water wells. A Water Source Assessment was prepared for the Project to evaluate the reliability and availability of the Project's water supplies (Appendix G). The Water Source Assessment includes a comprehensive assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the Tracy Subbasin. According to the Water Source Assessment, the Project is anticipated to result in an average daily water demand of 15,730 gallons and a maximum daily demand of 30,100 gallons per day. The Water Source Assessment found that the existing groundwater conditions are sufficient to supply the demands for the Project even during multiple dry years. In compliance with Chapter 9-1115 of the County Zoning Code, the San Joaquin County Environmental Health Division has confirmed these findings, as part of their duties to ensure that water quality and quantity are adequate to meet the needs of existing, proposed, and planned future development. Impacts would be less than significant.

Threshold B: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact. The Project would involve the use of groundwater supplies that would be sourced from on-site water wells. As discussed within the Water Source Assessment (Appendix G), the Project's groundwater supplies would be sufficient to supply the demands for the Project, even during multiple dry years, indicating that the Project would not substantially decrease groundwater supplies such that readily available supplies would be exhausted. In compliance with Chapter 9-1115 of the County Zoning Code, the San Joaquin County Environmental Health Division has confirmed these findings, as part of their duties to ensure that water quality and quantity are adequate to meet the needs of existing, proposed, and planned future development.

Additionally, the Project would involve the development of three infiltration basins and a septic tank/leech field system. The infiltration would allow for stormwater runoff collected on the Project to infiltrate into soils and recharge the underlying aquifer. Similarly, the septic tank and leech field system would allow for a portion of the Project's water use to be returned to the underlying aquifer. Given that the Project would not substantially decrease groundwater supplies or interfere with groundwater recharge, the Project would not impede sustainable groundwater management of the basin. Impacts would be less than significant.

Threshold C: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-than-Significant Impact. The Project would comply with applicable water quality regulatory requirements, including implementation of a Storm Water Pollution Prevention Program, stormwater BMPs, and Low Impact Development design, which would minimize potential off-site surface water quality impacts.

With respect to groundwater management, the Project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall watershed. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the watershed.

With respect to groundwater management, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The Project would be within the jurisdiction of the County's GSA, which is in the process of developing a GSP with the other GSAs within the Tracy Subbasin. The Tracy Subbasin GSP is currently being drafted and is expected to be adopted prior to January 31, 2022. The GSP is expected to identify a water budget for the Tracy Subbasin, goals to achieve sustainability of the Tracy Subbasin's groundwater resources, and projects and actions to continue the reliability of the region's groundwater supplies. The GSP is not anticipated to result in site-specific water use restrictions that the Project could conflict with. On the contrary, the GSP is expected to develop and implement projects that would increase recharge of the Tracy Subbasin. Given that these are collaborative planning efforts that would occur at the agency level, the Project would not interfere with the future GSP, Impacts would be less than significant.

Threshold D: Would the Project result in cumulatively considerable impacts relating to water or groundwater?

Less-than-Significant Impact. The Project would involve the use of groundwater supplies that would be sourced from on-site water wells. A Water Source Assessment was prepared to evaluate the reliability and availability of the Project's water supplies and determined that existing groundwater conditions are sufficient to supply the demands for the Project even during multiple dry years. The San Joaquin County Environmental Health Division has confirmed these findings, as part of their duties to ensure that water quality and quantity are adequate to meet the needs of cumulative development.

In addition, the Project would not substantially decrease groundwater supplies or interfere with groundwater recharge or interfere with sustainable groundwater management of the Tracy Subbasin. On the contrary, the GSP is expected to develop and implement projects that would increase recharge of the Tracy Subbasin, negating possible effects of cumulative development on groundwater supplies. Further, the Project would involve the development of three infiltration basins and a septic tank/leech field system. The infiltration would allow for stormwater runoff collected on the Project to infiltrate into soils and recharge the underlying aquifer. Similarly, the septic tank and leech field system would allow for a portion of the Project's water use to be returned to the underlying aquifer. Based on these considerations, the Project would have a less than significant cumulative impact with respect to water and groundwater.

4.8.5 Mitigation Measures

No mitigation measures are required.

4.8.6 Level of Significance After Mitigation

Threshold A: Would there be sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Project would result in **less-than-significant impacts** with regard to substantially decreasing groundwater supplies or impeding sustainable groundwater management of the basin. No mitigation is required.

Threshold B: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

The Project would result in **less-than-significant impacts** with regard to the availability of sufficient water supplies to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. No mitigation is required.

Threshold C: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project would result in **less-than-significant impacts** with regard to conflicting or obstructing implementation of a water quality control plan or sustainable groundwater management plan. No mitigation is required.

Threshold D: Would the Project result in cumulatively considerable impacts relating to water or groundwater?

The Project would result in **less-than-significant cumulative impacts** related to relating to water or groundwater. No mitigation is required.

4.8.7 References Cited

County of San Joaquin. 2016. *General Plan*. <https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/General%20Plan%202035/GENERAL%20PLAN%202035.pdf>.

Tracy Subbasin GSAs. 2020. Draft Tracy Subbasin Groundwater Sustainability Plan. June 2020. <https://portal.tracysubbasin.org/publicdocs>.

5 Effects Found Not To Be Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) briefly describe potential environmental effects that were determined not to be significant and, therefore, were not discussed in detail in the EIR. The environmental issues discussed in this chapter are not considered significant for the 14800 W. Schulte Road Logistics Center (Project). The reasons for these less-than-significant impacts or no impact determinations are discussed herein.

5.1 Aesthetics

Scenic Vistas

San Joaquin County (County) is located within the greater San Joaquin Valley, with the delta and large expanses of generally flat, agricultural lands and urban development framed by the foothills of the Diablo Range to the west and the foothills of the Sierra Nevada to the east. According to the San Joaquin County General Plan, scenic resources within the County include waterways, hilltops, and oak groves (County of San Joaquin 2016).

The Project site is located in a generally flat area and is surrounded by industrial development to the south and west and agricultural uses to the north and east. The Project would involve development of three, approximately 45-foot-tall warehouse buildings on a vacant site, which could potentially obstruct views of scenic resources if there were scenic resources located within the vicinity of the Project site. However, no scenic resources identified by the San Joaquin County General Plan (i.e., waterways, hilltops, or oak groves) are located within the vicinity of the Project. Agricultural lands are located adjacent to the Project site; however, given the presence of the existing industrial uses immediately south and west of the Project site, as well as the presence of industrial and residential development in the greater Project area, the viewshed that the Project site is located within would not be considered to contain expansive views of agricultural lands. The Project site is not located within a scenic vista nor would it affect any local scenic resources. Therefore, the Project would have a less-than-significant impact with regard to scenic vistas.

Scenic Resources

There are two officially designated state scenic highways in the County: Interstate (I) 580 and I-5 (Caltrans 2020). I-580 is located approximately 1.5 miles southwest of the Project site. Views toward the Project site from I-580 primarily consist of rolling hills covered in low grasses, agricultural uses, and industrial uses adjacent to the Project site. Industrial uses adjacent to the Project site would block views of the Project from I-580, and rolling hills intermittently also block views of the Project site. I-5 is located approximately 11.8 miles southeast of the Project site. Due to distance, intervening terrain, and development, the Project site not visible from I-5.

In addition, the County has designated 26 roadways as local scenic routes (County of San Joaquin 2016). The nearest locally designated scenic routes are I-580 and Corral Hollow Road, which extends to the southwest from I-580 and does not have views of the Project site. Therefore, the Project would have a less-than-significant impact associated with scenic resources within a state- or locally designated scenic highway.

Visual Character

Per California Public Resources Code Section 21071, the Project site is located in a non-urbanized area because the site is located in an unincorporated part of the County that is not completely surrounded by one or more

incorporated cities. The nearest incorporated city to the Project site is the City of Tracy, which has a population of 95,931 as of January 2020 (DOF 2020). Therefore, this analysis considers whether the Project would degrade the existing visual character or quality of public views of the site and surrounding area.

The Project site is located in an unincorporated area of the County that primarily consists of mixed agricultural and industrial uses, interspersed rural residential and public uses, and undeveloped areas. The Project site is bound by Schulte Road and agricultural uses to the north, Quality Road and agricultural uses to the east, and industrial uses to the west and south. The Project would involve the development of three single-story industrial buildings, and would include improvements along the Project's street frontage, including landscape, sidewalk, and parkway improvements. The Project site is currently vacant, consisting of disturbed, uneven soils and ruderal vegetation, and does not contain elements that would be perceived as visual resources or of valued visual quality or character. Development of the Project would result in conversion of the Project site from a vacant lot to a developed and maintained industrial site featuring three warehouse buildings and associated parking, loading docks, drive aisles, and landscaping.

Proposed buildings would be one story in height and would not conflict with the existing mass and scale of buildings in the Project area. Building facades would feature a complementary neutral color palette and a variety of building materials, similar to other industrial development located throughout the region. The overall intensity of use on the Project site would increase, and activities would include ingress and egress of passenger vehicles and trucks; loading and unloading of trucks within designated truck courts/loading areas; and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. However, buildings would be oriented such that all loading areas would face the interior of the site and would not be visible from adjacent public streets. Building elevations would include vertical and horizontal elements that would break up the overall massing of the buildings, and appropriately sited landscaping elements, including a variety of trees, shrubs, plants, and land covers, would provide additional screening and soften the appearance of the industrial site.

In an effort to ensure that current and future development within the Project area is designed and constructed to conform to existing visual character and quality of the surrounding built environment, the County's Ordinance Code (Title 9, Development Code) includes design standards related to building size, height, floor area ratio, and setbacks, as well as landscaping, signage, and other development standards that have an effect on visual considerations. These design standards help adjacent land uses to be visually consistent with one another and their surroundings and reduce the potential for aesthetic conflict. The design specifications of all development proposals submitted to the County are reviewed for compliance with all applicable provisions set forth by the Development Code. As part of the County's development review process, the Project's architectural plans are reviewed by County staff to determine whether the Project design conforms to the Development Code and promotes the visual character and quality of the surrounding area.

Since industrial uses are common in the Project area, the Project would not conflict with the industrial character of the immediately surrounding area. Further, more distant views of open grasslands, agricultural uses, foothills, and mountains would remain intact. Therefore, the Project would have a less-than-significant impact associated with the existing visual quality or character of the site and its surroundings.

Substantial Light or Glare

The existing lighting and glare conditions in the Project area are typical of a mixed industrial and agricultural area. Existing sources of light and glare in the Project area are limited to indoor building lighting emanating from windows,

outdoor safety and parking lot lighting associated with adjacent and nearby industrial buildings, indoor and outdoor lighting at rural residences, streetlights, and vehicles. The primary source of outdoor lighting in the Project area is the City of Tracy, which has residential and commercial areas of higher density and brighter ambient lighting conditions than the Project site and adjacent properties.

New lighting for the Project would include indoor and outdoor building lighting, parking lot lighting, and safety lighting. County Ordinance Code Section 9-1025.6 sets forth provisions for outdoor lighting, outlines standards for lighting adjacent to residential and commercial zones and stipulates that no lighting can cause glare on a street or alley. Adjacent properties to the Project site are zoned for industrial and agricultural use and do not consist of residential or commercial uses. Further, the nearest residential land uses are located approximately 0.35 miles to the northeast, and the nearest suburban residential area within the City of Tracy is located approximately 0.6 miles east of the Project site. All new lighting installed as part of the Project would be shielded and focused downward to prevent light spillover, consistent with Ordinance Code Section 9-1025.6. Further, the Project would not include any blinking, flashing, or extremely bright lighting. Therefore, the Project would have a less-than-significant impact associated with light and glare.

5.2 Agricultural and Forestry Resources

Conversion of Farmland

According to the California Department of Conservation, the Project site is categorized as urban and built-up land, and does not consist of protected farmland that includes Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The nearest Farmland is located immediate north and east of the Project site (CDOC 2020). The Project site was previously used for industrial uses and has not been used for agricultural uses since the 1980s (Partner 2018a). Therefore, the Project would have no impact associated with Farmland conversion.

The Project site is zoned General Industrial (I-G) and is not zoned for agricultural use (County of San Joaquin 2016). The Project site is not located on lands enrolled in a Williamson Act contract (CDOC 2016), and surrounding land primarily consists of urban built-up land. Therefore, the Project would have no impact associated with existing agricultural zoning or a Williamson Act contract.

The Project site is located in a mixed industrial and agricultural area, and land uses immediately surrounding the site consist of agricultural and industrial uses. The site is zoned for general industrial use (County of San Joaquin 2019a) and was previously used as a biomass energy plant. Since the Project site has been previously used for industrial uses, construction of the Project with new industrial uses would not result in the conversion of nearby Farmland to non-agricultural uses.

Conversion of Forestlands

There are no forest resources or zoning for forestlands or timber land located on or near the Project site. The County contains three native oak species that the County General Plan EIR identifies as forest land: valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), and interior live oak (*Quercus wislizeni*). Valley oak woodland within the County is found in Oak Grove Regional Park and Micke Grove Park. Blue oak habitat is found in the southwestern portion of the County in mid-to-upper elevations, between 500 and 3,000 feet, as well as scattered occurrences throughout the northeast corner of the County. A variety of riparian habitats occur in narrow and mixed fragments along creeks and rivers in the County, accounting for approximately 5,000 acres of land (County of San Joaquin

2014). There is no forestland on or near the Project site, and thus the Project would not result in the conversion of forestland to non-forest use. Therefore, the Project would have no impact associated with forestland conversion, forestland, or timberland.

5.3 Geology and Soils

Fault Rupture

The Alquist–Priolo Earthquake Zoning Act (Alquist–Priolo Act) requires the delineation of fault 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 hazards associated with fault rupture. Alquist–Priolo Earthquake Fault Zones are the regulatory zones that include surface traces of active faults.

According to the California Department of Conservation, the nearest active Alquist–Priolo Fault Zone to the Project site is the Greenville Fault Zone, located approximately 9.8 miles southwest of the Project site (DOC 2020). In addition, the Great Valley 7 Fault, considered an active fault by the state, is located approximately 4.4 miles south of the Project site (CEG 2020). However, no faults are located within or below the Project site. As such, the potential for surface rupture of an Alquist–Priolo Earthquake Fault on the Project site is very low. Therefore, no impacts associated fault rupture would occur.

Seismic Ground Shaking

As previously discussed, the Project site is not located within an Alquist–Priolo Earthquake Fault Zone. However, similar to other areas located in seismically active Northern California, the Project area is susceptible to strong ground shaking during an earthquake, although the site would not be affected by ground shaking more than any other area in the region would be.

The Project would be required to comply with the most recent version of the California Building Code (CBC), which contains universal standards related to seismic load requirements and is codified within the County’s Ordinance Code under Section 8-1000. In addition, pursuant to Section 9-905.11, Project implementation requires preparation of a site-specific geotechnical investigation report by a state-registered geotechnical engineer. The site-specific geotechnical investigation report includes an evaluation of on-site soils and their related potential to result in seismic hazards, and if necessary, prescribes corrective measures to ensure structural stability in the event of seismic activity. Pursuant to the Section 9-905, the recommended actions of a geotechnical investigation must be incorporated into site preparation and construction.

A site-specific geotechnical investigation was prepared by Cornerstone Earth Group in February 2020 for the Project and includes recommendations to ensure structural stability, including compaction requirements, removal of existing fills and replacement with engineered fill, and foundation construction requirements (CEG 2020). Compliance with the CBC and the engineering recommendations in the site-specific geotechnical investigation report, which will be reviewed and verified by County staff, would ensure structural integrity in the event that seismic ground shaking is experienced at the Project site. Therefore, impacts associated with seismic ground shaking would be less than significant.

Ground Failure

Soil liquefaction is a seismically induced form of ground failure. Liquefaction is a process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain, such as an earthquake.

The Project site's subsurface is composed of several interbedded layers of medium-density sands and stiff to hard clays and silts to approximately 50 feet below ground surface. Below a depth of 50 feet, the subsurface is primarily composed of stiff to hard clays and silts. Soil samples taken from the Project site as part of the site-specific geotechnical investigation report indicate that on-site soils could potentially experience liquefaction resulting in settlement on the order of 0.25 inches or less. As a result, the geotechnical investigation (CEG 2020) includes engineering specifications to mitigate potential impacts related to liquefaction. Compliance with the CBC and the engineering recommendations in the site-specific geotechnical investigation report, which will be reviewed and verified by County staff, would ensure structural integrity in the event that liquefaction is experienced at the Project site. Therefore, impacts associated with liquefaction would be less than significant.

Landslide

The Project site is located in an area that is relatively flat and does not contain any slopes that could result in landslides. Although the Project site currently contains various depressions and varies in elevation, the topography of the Project site would be graded as part of construction activities. Upon completion of grading activities, the Project site would be level, similar to the surrounding area. As such, there is no potential for landslides to occur on or near the Project site. Therefore, impacts associated with landslides would be less than significant.

Soil Erosion and Topsoil Loss

Short-Term Construction Impacts

The Project would involve earthwork and other construction activities that would disturb surface soils and temporarily leave exposed soil on the ground's surface. Common causes of soil erosion from construction sites include stormwater, wind, and soil being tracked off site by vehicles. To help prevent erosion, Project construction activities must comply with all applicable federal, state, and local regulations for erosion control. The Project would be required to comply with standard regulations, including the provisions of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling and excavating. The NPDES Construction General Permit requires implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include construction features for the Project (i.e., best management practices [BMPs]) designed to prevent erosion and protect the quality of stormwater runoff. Sediment-control BMPs may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent. Therefore, construction impacts associated with soil erosion would be less than significant.

Long-Term Operational Impacts

Once redeveloped, the Project site would include buildings, paved surfaces, and other on-site improvements that would stabilize and help retain on-site soils. The remaining portions of the Project site containing pervious surfaces would primarily consist of landscape areas. These landscape areas would include a mix of trees, shrubs, plants, and groundcover that would help retain on-site soils while preventing wind and water erosion from occurring. Therefore, operational impacts related to soil erosion would be less than significant.

Unstable Geologic Unit or Soil

As part of the Project design process, a site-specific geotechnical investigation was prepared for the Project site (CEG 2020) to identify Project design features that may be necessary to ensure compliance with the CBC and to

address seismic design considerations. As part of the Project and as recommended by the geotechnical investigation, remedial grading would occur within the proposed building areas to remove undocumented fill that underlies the Project site, and these soils would be replaced with compacted fill soils.

As a result of these grading activities, which are both part of the Project and required by the CBC, the Project would not be susceptible to the effects of any potential lateral spreading, subsidence, or liquefaction. Compliance with the CBC and the engineering recommendations in the site-specific geotechnical investigation would ensure structural integrity in the event that seismic-related issues are experienced at the Project site. Therefore, impacts associated with unstable geologic units would be less than significant.

Expansive Soils

Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the cycle of wetting and drying. Much of the damage to building foundations, roads, and other structures can be caused by the swelling and shrinking of soils as a result of wetting and drying. The volume change is influenced by the amount of moisture and the amount of clay in the soil. Clay minerals are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for substantial expansion.

According to the site-specific geotechnical investigation report prepared for the Project (CEG 2020), moderately expansive surficial soils generally blanket the Project site. As a result, the geotechnical investigation report includes engineering specifications to reduce the potential for damage to the planned structures, including placing a layer of non-expansive artificial fill beneath on-grade slabs, placing footings below the zone of seasonal moisture fluctuation, and limiting moisture changes in the surficial soils by using positive drainage away from buildings.

As a result of these grading and engineering specifications, which are both part of the Project and required by the CBC, the Project would not be susceptible to the effects of expansive soil. Compliance with the CBC and the engineering recommendations in the site-specific geotechnical investigation would ensure structural integrity in the event that seismic-related issues are experienced at the Project site. Therefore, impacts associated with expansive soils would be less than significant.

Septic Tanks

The Project would include on-site septic tanks and associated leach fields to treat wastewater generated by the three warehouse buildings. Septic tanks installed in the County are subject to County Ordinance Code Section 9-1100, et seq., which requires issuance of a Sanitation Permit by the San Joaquin County Environmental Health Division for the construction of a private septic system and sets forth requirements for the siting and construction of private septic systems.

Prior to issuance of a Sanitation Permit, the San Joaquin County Environmental Health Division would review the proposed septic system to ensure that on-site soils are capable of supporting such a system. As part of the Project entitlement process, the Project applicant will comply with the County's Sanitation Permit process and submit proposed plans to the County Environmental Health Division for review and approval. Compliance with this process would ensure adverse impacts associated with on-site soils and septic systems do not occur. Therefore, impacts associated with the underlying soils' ability to support septic systems would be less than significant.

Paleontological Resources

According to the County's General Plan EIR (County of San Joaquin 2014), several paleontological specimens have been discovered in the County. The vast majority of paleontological specimens in the County have been found in rock formations in the foothills of the Diablo Mountain Range. However, remains of extinct animals, such as mammoth, could be found virtually anywhere in the County, especially along watercourses, such as the San Joaquin River and its tributaries.

Although the Project site is located within the proximity of these fossil-bearing features, the Project site has been subject to extensive disturbance, including previous grading and utility excavation activities, that occurred as a result of the prior biomass energy facility. In addition, previous development of the Project site involved the placement of artificial fill on the site. Transported fill materials generally do not contain significant paleontological resources on or very near the surface immediately underlying a site. These activities on the Project site have resulted in a site that is highly variable, containing various depressions as deep as 20 feet below ground surface. Given the extent of this disturbance, it is unlikely that paleontological resources, if they were ever present on site, would remain intact. Therefore, impacts associated with paleontological resources would be less than significant.

5.4 Hazards and Hazardous Materials

Transport, Use, and Disposal of Hazardous Materials

Under existing conditions, the Project site is unoccupied and contains several soil stockpiles associated with the site's previous use as a biomass energy facility, which has since been demolished. A Phase II subsurface investigation was conducted at the Project site to investigate impacts of the potential release of hazardous materials that may have been handled on the Project site as a result of previous on-site operations (Partner 2018b).

The Phase II subsurface investigation included a geophysical survey, the advancement of 12 soil borings, and the collection of one shallow soil sample and one four-point composite soil sample. A total of 14 soil samples were analyzed for total petroleum hydrocarbons, volatile organic compounds, and metals. After analysis, the Phase II investigation determined that various metals are present within the subsurface at shallow depths; however, none of the detected metals exceed California Code of Regulations Title 22 criteria indicating that on-site soils would be considered a hazardous waste (Partner 2018b). If affected soil were to be moved off site, additional sampling may be required to confirm whether the soil meets receiving-facility criteria, although such sampling would be required only to meet receiving-facility criteria, and the retaining of soil on site would not pose a risk to future occupants of the site.

The Phase II investigation also found evidence of residual total petroleum hydrocarbons in soil beneath the Project site; however, these detections are below the San Francisco Bay Regional Water Quality Board Environmental Screening Levels and do not represent a significant threat to human health or the environment (Partner 2018b). Should Project implementation require the export of existing soils off site, soils would be transported to a permitted facility for disposal in accordance with facility requirements and with applicable regulations. As such, the Phase II investigation concluded that the site's former use has not resulted in any conditions that would require remediation or present a hazard to construction workers or future occupants of the Project site (Partner 2018b).

During construction of the Project, potentially hazardous materials would likely be handled on the Project site. These materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products required to operate

and maintain construction equipment. Handling of these potentially hazardous materials would be temporary and would coincide with the short-term construction phase of the Project. Although these materials would likely be stored on the Project site, storage would be required to comply with the guidelines set forth by each product's manufacturer and with all applicable federal, state, and local regulations pertaining to the storage of hazardous materials. Consistent with federal, state, and local requirements, the transport of hazardous materials to and from the Project site would be conducted by a licensed contractor. Any handling, transport, use, or disposal of hazardous materials would comply with all relevant federal, state, and local agencies and regulations, including the U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, the California Occupational Safety and Health Administration, the California Department of Transportation, the Resource Conservation and Recovery Act, the San Joaquin Valley Air Pollution Control District, and the San Joaquin County Environmental Health Department. Therefore, construction impacts related to the transport, use, or disposal of hazardous materials would be less than significant.

Upon completion of construction, hazardous materials associated with Project operations would include materials used during typical cleaning and maintenance activities. Although these potentially hazardous materials would vary, they would generally include household cleaning products, paints, fertilizers, and herbicides and pesticides. Many of these materials are considered household hazardous wastes, common wastes, and/or universal wastes by the U.S. Environmental Protection Agency, which considers these types of wastes to be common to businesses and households and to pose a lower risk to people and the environment than other hazardous wastes when properly handled, transported, used, and disposed of (EPA 2020). Federal, state, and local regulations typically allow these types of wastes to be handled and disposed of with less stringent standards than other hazardous wastes, and many of these wastes do not have to be managed as hazardous waste.

In addition, any potentially hazardous material handled on the Project site would be limited in both quantity and concentrations, consistent with other similar industrial uses located in the County, and any handling, transport, use, and disposal would comply with applicable federal, state, and local agencies and regulations. Furthermore, as mandated by the U.S. Occupational Safety and Health Administration (OSHA n.d.), all hazardous materials stored on the Project site would be accompanied by Material Safety Data Sheets, which would inform employees and first responders on the necessary remediation procedures in the case of accidental release. Therefore, operational impacts related to the transport, use, or disposal of hazardous materials would be less than significant.

Release of Hazardous Materials into the Environment

The Project site's existing conditions would not present a hazard to construction workers or future occupants of the Project site, and the handling of hazardous materials during construction and operation of the Project would be conducted in accordance with applicable regulations so as to prevent the accidental release of hazardous materials into the environment. Therefore, impacts associated with a release of hazardous materials into the environment would be less than significant.

Hazardous Materials Use Near Schools

The nearest school to the Project site is Kelly Elementary School (535 Mabel Josephine Drive), located approximately 1.3 miles east of the Project site. In addition, Project operational activities would not emit hazardous air emissions or handle hazardous or acutely hazardous materials. Therefore, no impacts associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 miles of school would occur.

Hazardous Materials Site Complied Pursuant to Government Code Section 65962.5

The Hazardous Waste and Substances Sites List (Cortese List) is a planning document providing information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to develop, at least annually, an updated Cortese List. The Department of Toxic Substances Control is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List.

A review of federal, state, County, and city environmental record sources was conducted as part of a Phase I Environmental Site Assessment (Partner 2018a) and identified the Project site on several regulatory databases for the use and storage of hazardous materials. However, subsequent investigation that was conducted as part of the Phase II subsurface investigation concluded that the Project's listing on these regulatory databases would not pose a health risk to future occupants of the Project site (Partner 2018a, 2018b). Therefore, impacts associated with Cortese List hazardous materials sites would be less than significant.

Airport-Related Safety Hazards or Excessive Noise

The Project site is not located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport. The closest airport is the Tracy Municipal Airport, located approximately 3 miles southeast of the Project site, and the Project site is outside of the airport influence area as delineated in the Tracy Municipal Airport Master Plan (City of Tracy 1998). As such, no impacts associated with public or private airstrips would occur.

Emergency Response and Evacuation Plans

The County of San Joaquin Emergency Operations Plan is an all-hazards document describing the County's incident management structure, compliance with relevant legal statutes, other relevant guidelines, whole community engagement, continuity of government focus, and critical components of the incident management structure. According to the Emergency Operations Plan, major transportation routes in the County, including I-580 and I-205, would be possible evacuation routes in the event of an emergency (County of San Joaquin 2019b).

The Project would not affect these routes, and moreover, the Project would not affect the County's ability to implement its Emergency Operations Plan in the event of an emergency. In addition, the City of Tracy has adopted a Comprehensive Emergency Management Plan (City of Tracy 2020). However, there are no specific routes identified in the Comprehensive Emergency Management Plan. Notwithstanding, the Project would not impede access to any public route that might be needed as an evacuation route. Should Project construction require temporary closures of lanes within Schulte Road, traffic control measures (consistent with the California Manual on Uniform Traffic Control Devices and as required by the County Public Works Department as part of the encroachment permit process) would be implemented to ensure local emergency access is maintained. As a result, the Project would not significantly affect emergency response or evacuation activities. Therefore, impacts associated with emergency response or evacuation plans would be less than significant.

Fire Hazard

The Project site is not located within a Very High Fire Hazard Severity Zone (FHSZ) according to the Local Responsibility and State Responsibility Area (SRA) maps by the California Department of Forestry and Fire Protection (CAL FIRE). CAL FIRE has designated areas south and southwest of the Project site as being within a Moderate FHSZ within a Local Responsibility Area (CAL FIRE 2020).

In addition, some undeveloped hillside areas in the Diablo Mountains south of I-580, approximately 3.7 miles southwest of the Project site, are designated as being within a High FHSZ within an SRA (CAL FIRE 2020). These ratings do not extend to the Project site, and the Delta Mendota Canal separates the Project site from these areas to the south, which could function as a firebreak in the event of a wildfire, further lessening the potential for wildfire to affect the Project site. Therefore, impacts associated with wildland fires would be less than significant.

5.5 Hydrology and Water Quality

Degradation to Surface or Groundwater Quality

Construction of the Project would include earthwork activities that could potentially result in erosion and sedimentation, which could subsequently degrade downstream receiving waters and violate water quality standards. Stormwater runoff during the construction phase may contain silt and debris, resulting in a short-term increase in the sediment load of the municipal storm drain system. Substances such as oils, fuels, paints, and solvents may be inadvertently spilled on the Project site and subsequently conveyed via stormwater to nearby drainages, watersheds, and groundwater.

For stormwater discharges associated with construction activity in California, the State Water Resources Control Board (SWRCB) has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs 1 acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a SWPPP, which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB.

Because land disturbance for Project construction activities would exceed 1 acre, the Project applicant would be required to obtain coverage under the Construction General Permit issued by the SWRCB prior to the start of construction within the Project site. Specifically, the Construction General Permit requires that the following be kept on site at all times: a copy of the Notice of Intent to Comply with Terms of the General Permit to Discharge Water Associated with Construction Activity; a waste discharge identification number issued by the SWRCB; a SWPPP and Monitoring Program Plan for the construction activity requiring the construction permit; and records of all inspections, compliance and non-compliance reports, evidence of self-inspection, and good housekeeping practices.

The SWPPP requires the construction contractor to implement water quality BMPs to ensure that water quality standards are met and that stormwater runoff from the construction work areas do not cause degradation of water quality in receiving water bodies. The SWPPP must describe the type, location, and function of stormwater BMPs to

be implemented, and must demonstrate that the combination of BMPs selected are adequate to meet the discharge prohibitions, effluent standards, and receiving water limitations contained in the Construction General Permit. As such, through compliance with the Construction General Permit, the Project would not adversely affect water quality. Therefore, short-term construction impacts associated with water quality would be less than significant.

With respect to Project operation, future uses on site that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris. During storm events, the first few hours of moderate to heavy rainfall could wash a majority of pollutants from the paved areas where, without proper stormwater controls and BMPs, those pollutants could enter the municipal storm drain system before eventually being discharged to adjacent waterways. The majority of pollutants entering the storm drain system in this manner would be dust, litter, and possibly residual petroleum products (e.g., motor oil, gasoline, diesel fuel). Certain metals, along with nutrients and pesticides from landscape areas, can also be present in stormwater runoff. Between periods of rainfall, surface pollutants tend to accumulate, and runoff from the first significant storm of the year (“first flush”) would likely have the largest concentration of pollutants.

Stormwater quality in the County is regulated by the Stormwater Quality Control Criteria Plan (SWQCCP), which sets forth standards that apply to all new developments and significant redevelopment projects falling under the priority project categories, of which the Project site is one. The primary strategy employed by the SWQCCP is to require development to manage and treat stormwater flows to the maximum extent practicable to control pollutants, pollutant loads, and runoff volume by minimizing the impervious surface area and implementing source control measures, controlling runoff from impervious surfaces using structural BMPs (e.g., infiltration, bioretention, and/or rainfall harvest and re-use), and ensuring all structural BMPs are monitored and maintained for the life of the development. These measures are often referred to as low-impact development principles (City of Stockton and County of San Joaquin 2009).

As part of the Project, a new engineered stormwater drainage system would be constructed on the Project site to collect and treat on-site stormwater. After development, a majority of stormwater from the Project site would drain into three below-grade, open, earthen infiltration basins within the north portion of the site. Stormwater flows would be conveyed via sheet flows away from buildings, and where possible, through below-grade, landscaped areas prior to entering the nearest catch basin and subsequently being conveyed to the three earthen detention basins. The landscaped areas would act as the first filter for detaining suspended solids in stormwater flows. The detention basins would be planted with native grasses and erosion control vegetation along their side banks. Stormwater flows collected by the detention basins would be allowed to infiltrate into the soils, recharging the underlying groundwater basin (San Joaquin Valley Basin).

The Project and its new stormwater drainage system would be sized to capture and treat all on-site stormwater generated by two consecutive 10-year, 24-hour storm events, as required by the County. The detention basins would feature an earthen bottom that would allow flows collected by the detention basins to infiltrate into the soil and recharge the underlying groundwater basin. The Project’s stormwater capture and treatment system would be designed to meet the requirements of the SWQCCP, ensuring that the Project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality.

With respect to groundwater quality, the Project would include BMPs that would allow for stormwater to be collected and treated in biofiltration basins to allow for stormwater flows to infiltrate soils and recharge groundwater. These structural BMPs would treat stormwater flows prior to infiltration, ensuring that flows infiltrating groundwater

aquifers do not result in adverse effects to groundwater quality. Moreover, flows entering these biofiltration basins would be typical of runoff collected from a commercial development and would not contain substantial quantities of pollutants that could not be appropriately treated by the proposed BMPs.

In summary, Project grading and construction would be completed in accordance with an NPDES-mandated SWPPP, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Surface water runoff during Project operations would be managed through a mixture of strategies that would be designed to remove pollutants from on-site runoff prior to discharge into the storm drain system to the maximum extent practicable, as required by the SWQCCP. Therefore, impacts associated with water quality standards, waste discharge requirements, and surface water and groundwater quality would be less than significant.

Result in Substantial Erosion or Siltation

Under existing conditions, the Project site is undeveloped and contains various elevated areas and depressions. The Project would involve grading activities that would bring the Project site to a flat grade and the construction of new paved surfaces, warehouse buildings, and landscape areas. The Project would also include a new engineered stormwater drainage system that would feature structural BMPs, such as retention facilities, to treat and manage stormwater flows. The Project's future drainage conditions would be designed to mimic the existing on-site drainage conditions to the maximum extent practicable, but construction activities would inevitably result in changes to the internal drainage patterns of the site. However, the Project's future storm drain system would be designed to conform with applicable federal, state, and local requirements related to drainage, hydrology, and water quality, including the County's SWQCCP.

Per the requirements of the County's SWQCCP, Project plans will be required to demonstrate the capacity to capture and treat all on-site stormwater generated by two consecutive 10-year, 24-hour storm events, thereby reducing the potential for the Project to result in stormwater flows off site that could result in erosion on or off site. In addition, the Project's structural BMPs would be designed such that any potential sediments collected on site would be captured in retention facilities so that they would not be conveyed to downstream waters and result in siltation. As such, alteration of the on-site drainage pattern would be conducted in a manner consistent with all applicable standards related to the collection and treatment of stormwater such that it would not result in substantial erosion or siltation on or off site. Therefore, impacts associated with altering the existing drainage pattern of the Project site and resulting in erosion or siltation would be less than significant.

Result in Increased Surface Runoff and Subsequent Flooding

The Project would inevitably result in changes to the internal drainage patterns of the Project site. However, the Project's future storm drain system would be designed to conform with applicable federal, state, and local requirements related to drainage, hydrology, and water quality, including the County's SWQCCP. As such, alteration of the on-site drainage pattern would be conducted in a manner consistent with all applicable standards related to the collection and treatment of stormwater.

In addition, according to Flood Insurance Rate Map No. 06077C0730F (FEMA 2020) for the Project area, the Project site is located within Zone X, which is defined by the Federal Emergency Management Agency as an area located outside of the 100-year and 500-year flood plains. Therefore, impacts associated with altering the existing drainage pattern of the Project site and subsequent flooding would be less than significant.

Result in Exceedance of Existing Stormwater Drainage Systems

The Project would inevitably alter the drainage patterns of the Project site; however, the Project would include a new engineered stormwater drainage system that would be designed to conform with applicable federal, state, and local requirements related to drainage, hydrology, and water quality, including the SWQCCP. Alteration of the on-site drainage pattern would be conducted in a manner consistent with all applicable standards related to the collection and treatment of stormwater. Therefore, impacts associated with altering the existing drainage pattern of the Project site and exceeding stormwater drainage systems would be less than significant.

Result in Redirection of Flood Flows

The Project would result in changes to the internal drainage patterns of the Project site. However, the Project's proposed storm drain system would be designed to conform with applicable federal, state, and local requirements related to drainage, hydrology, and water quality, including the County's SWQCCP. As such, alteration of the on-site drainage pattern would be conducted in a manner consistent with all applicable standards related to the collection and treatment of stormwater.

In addition, according to Flood Insurance Rate Map No. 06077C0730F (FEMA 2020) for the Project area, the Project site is located within Zone X, which is defined by the Federal Emergency Management Agency as located outside of the 100-year and 500-year flood plains. Therefore, impacts associated with altering the existing drainage pattern of the Project site and resulting in the redirection of flood flows would be less than significant.

Flood Hazard, Tsunami, or Seiche Zones

According to Flood Insurance Rate Map No. 06077C0730F (FEMA 2020) for the Project area, the Project site is located within Zone X, which is defined by the Federal Emergency Management Agency as located outside of the 100-year and 500-year flood plains. Therefore, no impacts associated with impeding or redirecting flood flows would occur. There are also no impacts anticipated related to tsunami as it is not located near the ocean nor seiche due to the project not being located near a large enclosed body of water.

5.6 Land Use and Planning

Division of an Existing Community

The physical division of an established community typically refers to the construction of a linear feature (e.g., a major highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community or between a community and outlying area.

Currently, the Project site is fenced and is not used as a connection between established communities. Instead, connectivity within the area surrounding the Project site is facilitated via local roadways. As such, the Project would not impede movement within the Project area, within an established community, or from one established community to another. Therefore, no impacts associated with the division of an established community would occur.

Conflict with Land Use Plans

The Project is located within the unincorporated County and is subject to the County's General Plan and County of San Joaquin Ordinance Code, which guide local development.

The County of San Joaquin’s General Plan Land Use Map designates the Project site as General Industrial (I/G), and the Zoning Map identifies the Project site as General Industrial (I-G). According to the County’s General Plan, the General Industrial Zone is intended to provide for a full range of industrial activities whose location and operation tend to have moderate to high nuisance characteristics, and therefore require segregation from other land uses. Typical uses include manufacturing, distribution, storage, and wholesaling (County of San Joaquin 2017).

Similarly, the General Industrial (I-G) Zone is intended to provide for a wide range of manufacturing, distribution, and storage uses. This zone is intended to implement the General Industrial land use category of the General Plan (County of San Joaquin 2017). According to Section 9-500 of the County of San Joaquin Ordinance Code, the Project, a warehouse and distribution use, would be permitted within the General Industrial (I-G) zone with a site approval.¹ Section 9-500 et seq. of the County of San Joaquin Ordinance Code also provides development standards, including height limits, building coverage requirements, and site access specifications, to ensure that development is consistent with the policies and principles of the General Plan.

The Project site would support a variety of industrial uses, depending on the future tenants. These future uses would include those related to warehouse, distribution, and/or logistics, which is consistent with the permissible uses and activities allowed by the Site Approval for the Wholesaling and Distribution—Light Use (Site Approval). Any industrial uses not covered under this Site Approval would require a new land use approval and environmental review. As part of the County’s site plan review process, the County will review the Project’s site plan for consistency with all development standards required by the Site Approval for the General Industrial (I-G) zone as specified in Section 9-500 of the County of San Joaquin Ordinance Code. This review by County staff would ensure that the Project is consistent with both the County’s Ordinance Code and the County’s General Plan.

Because the Project site is located within the City of Tracy’s sphere of influence, the City of Tracy’s General Plan Land Use Map has designated the Project site as Industrial (City of Tracy 2016). According to the City of Tracy’s General Plan, specific uses allowed in the industrial category range from flex/office space to manufacturing to warehousing and distribution. Industrial uses are located to provide proper truck access, buffering from incompatible uses, and proximity to rail corridors and transit links (City of Tracy 2011). The Project, as a warehouse and distribution use, would be consistent with the City of Tracy’s General Plan land use designation for the Project site, and implementation of the Project would not conflict with the City of Tracy’s General Plan.

Therefore, because the Project would be consistent with the County General Plan, County Ordinance Code, and City of Tracy General Plan, impacts associated with applicable land use plans, policies, and regulations would be less than significant.

5.7 Mineral Resources

Mineral Resources and Recovery Sites

The Project site is located within the Stockton–Lodi Production–Consumption Region, which is an approximately 412-square-mile area within San Joaquin and Stanislaus counties that is known to contain significant sand and gravel (aggregate) deposits. However, according to the State Mining and Geology Board Designation Report 16: Updated Designation of Regional Significant Aggregate Resources, which is a document that provides information

¹ A site approval issued by the County of San Joaquin Planning Commission is required for any industrial use that is 6,000 square feet or greater in ground floor area; occupies 10 or more acres of site area; or is not served by a public wastewater treatment plant, public water system, and public drainage system. Because the Project meets all those criteria, a site approval is required.

on the availability of aggregate deposits in the region, the Project site is located in an area where little likelihood exists for the presence of significant mineral resources (CDOC 2017). As such, implementation of the Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Therefore, impacts associated with the loss of availability of a known mineral resource would be less than significant.

In addition, the County General Plan does not delineate the Project site as being located within an area with locally important mineral resources (County of San Joaquin 2016). As such, implementation of the Project would not result in the loss of availability of a locally important mineral resource recovery site. Therefore, impacts associated with the loss of availability of a locally important mineral resource recovery site would be less than significant.

5.8 Noise

The Project site is not located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport. The closest airport is the Tracy Municipal Airport, located approximately 3 miles southeast of the Project site, and the Project site is outside of the airport influence area as delineated on the Tracy Municipal Airport Master Plan (City of Tracy 1998). Therefore, no impact associated with public airport or private airstrips noise would occur.

5.9 Population and Housing

Inducement Population Growth

The Project would involve construction of three warehouse buildings and associated office space that would be used for general warehouse and distribution operations. The Project would require temporary construction and a permanent operational workforce, both of which could potentially induce population growth in the Project area.

The temporary workforce would be needed to construct the new buildings and related on-site improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction. These short-term positions are anticipated to be filled primarily by construction workers who reside in the Project area. Therefore, construction of the Project would not generate a temporary increase in population within the Project area.

Once the Project is operational, the Project would not directly result in the addition of new residents to the area, because the Project would not involve residential development. Based on typical employee densities for warehousing and distribution uses, it is expected that the Project would result in approximately 555 employment opportunities. The additional employees may come from the Project area; however, this analysis conservatively assumes that all 555 new employees would relocate to the Project area.²

² For purposes of this analyses, employment estimates were calculated using average employment density factors reported by Southern California Association of Governments (SCAG). SCAG reports that for every 1,225 square feet of warehouse space in the region, including Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial counties, the median number of jobs supported is one employee (SCAG 2001). Although these estimates are based on data collected in Southern California, they are appropriate for use in Northern California because employment density rates as they pertain to the warehouse/industrial industry are primarily a function of the use and are not typically location-dependent. The Project would include approximately 678,913 square feet of flexible industrial space. As such, the estimated number of employees required for operation would be approximately 555 persons.

Under the County's 2035 General Plan, the County is anticipated to add 51,000 new jobs through 2035 for a total 271,685 jobs in the County by 2035; projections for employment growth under the 2035 General Plan are relatively consistent with San Joaquin Council of Governments projections that there would be 282,613 jobs within the County by 2035 (County of San Joaquin 2016; SJCOG 2014). Given these anticipated employment projections, the Project's 555 new employees would represent a relatively small percentage of new employment projections in the County. In addition, given the non-managerial nature of most of the future employment opportunities provided on site, it is anticipated that future employees would not relocate into the area to work at the Project, and instead, these largely non-managerial positions would primarily be filled by the local labor force.

Further, the Project would not involve development of infrastructure or roadways that could indirectly lead to population growth, and as such, the Project would not stimulate unplanned population growth or population concentration above what is assumed in local and regional land use plans. Therefore, impacts associated with population growth would be less than significant.

Displacement of Existing Housing and People

The Project site is currently undeveloped and does not support residential uses. Further, residential uses are not allowed on site under the current land use designation or zoning. As such, the Project would not displace existing housing, nor would it impede future residential development potential. Therefore, no impacts associated with the displacement of people or housing would occur.

5.10 Public Services

Fire Protection Facilities

Fire protection services in the Project area are provided by the South San Joaquin County Fire Authority (SSJCFA), which is a joint powers authority between the City of Tracy and the Tracy Rural Fire Protection District (Rural Fire Protection District). Between the jurisdictional areas of the City of Tracy and the Rural Fire Protection District, the SSJCFA provides fire protection, life safety, and emergency response services to 160 square miles of the southern part of San Joaquin County. The SSJCFA currently operates six fire stations, a support services building, and an administrative office. Twenty-four-hour-a-day staffing is provided, with six paramedic engine companies and one paramedic ladder truck company. Four fire stations are within the incorporated area of the City of Tracy, and two are in the surrounding rural Tracy area.

Pursuant to a joint powers authority agreement, the SSJCFA maintains all fire stations, and each member agency is responsible for the operation, including staffing and maintenance, of fire facilities in their respective fire jurisdictions. The nearest fire station to the Project site is Station 94, located at 16501 Schulte Road, approximately 1.1 miles west of the Project site; however, the SSJCFA plans to relocate this station to Promontory Parkway (between Hansen Road and International Parkway), as discussed further below.

Under existing conditions, the SSJCFA has determined that it is not currently meeting response times to calls for service. A Standards for Cover study prepared in 2017 concluded that the only way to appreciably meet response to service goals is to add more fire stations as revenues permit (City of Tracy 2019). Recognizing the need to meet response time standards and plan for future growth and development patterns, the SSJCA has developed plans, in conjunction with the City of Tracy and the Rural Fire Protection District, to relocate existing stations, including Station 94, and construct additional new stations within its service area.

The SSJCA is currently implementing identified infrastructure improvements that are anticipated to address long-term fire protection needs within SSJCA's jurisdiction (City of Tracy 2019). Funding for these improvements is derived from a variety of sources, including development impact fees collected by the City of Tracy and a fire facilities impact fee collected by the Rural Fire Protection District for rural areas not included within the City of Tracy's Citywide Public Safety Master Plan. Given that it may take more than 20 years before all total fees are collected, the City of Tracy has advanced much of these funds for immediate use, such that a financing plan for the relocation of Station 94, as well as the construction of two new stations and relocation of another station, has already been approved by the City of Tracy.

Upon completion of fire infrastructure improvements (and on an ongoing basis), SSJCA operations are funded through the City of Tracy's General Fund and the Rural Fire Protection District (City of Tracy 2019). The City of Tracy's General Fund allocations are derived from property taxes, sales tax revenue, and user fees. The Rural Fire Protection District receives its funding through property tax from the County and a special assessment fee for those structures located in the Rural Fire Protection District.

To ensure that adequate staffing and facilities are maintained to address existing and future development, the SSJCFA Board of Directors reviews its budget on an annual basis and makes the appropriate provisions for additional personnel, equipment, and facility improvements as necessary. As concluded in the City of Tracy Municipal Services Review prepared in May 2019, the City of Tracy and the Rural Fire Protection District have actively planned to ensure adequate fire services are provided throughout their service areas, even when accounting for increased service demands as areas are developed (City of Tracy 2019).

Because the SSJCA, City of Tracy, and Rural Fire Protection District have appropriately planned for anticipated growth in the greater Project area (including the Project site), and because the Project would be subject to the fire impact fees collected by the Rural Fire Protection District and would contribute funds to the operation of the SSJCA on an ongoing basis (through the County's property tax assessment and special assessment fee collections), Project impacts associated with fire protection facilities would be less than significant.

Police Protection Facilities

Police protection services for the Project area are provided by the San Joaquin County Sheriff's Department. The County is divided into eight geographical areas, or "beats." These beats are staffed around the clock, providing emergency response capability to citizens in the unincorporated area. The Project site is located within Beat 8, which generally covers the unincorporated areas around the City of Tracy. The Tracy Police Department and San Joaquin County Sheriff's Department provide mutual aid when a situation exceeds the capabilities of either department (City of Tracy 2019).

According to the County's General Plan, the County is anticipating growth within spheres of influence that would not be immediately annexed into a particular city, and the County Sheriff's office has long-term staffing plans that would increase staffing across multiple divisions and expand patrol services into various urban and rural areas to be used as substations (County of San Joaquin 2016). The Project would result in the payment of property taxes that would result in additional revenue being available to the County, and, indirectly, would result in increased revenue available to the County Sheriff's Department.

In addition, compared with land uses such as residential and commercial, the proposed warehouse and logistics use would not result in anything more than a nominal increase in calls for police protection service to the Project site; as such, the Project is not anticipated to generate a larger volume of calls of service to the site that could

burden the County Sheriff's Department. Further, design of the Project would incorporate the basic principles Crime Prevention Through Environmental Design, including controlling access to buildings to reduce opportunities for crime to occur and making as much of the site as possible visible from the public right-of-way to deter on-site crimes. Therefore, impacts associated with police protection facilities would be less than significant.

School Facilities

The Project site is located within the Lammersville Unified School District. The Project would involve development of a warehouse and distribution use and does not include a residential component that would directly result in new residents or school-age children in the area. Although a portion of the Project's employees are likely to have school-age children, it is anticipated that the majority of these employees would already be located within the Project area (refer to Section 5.9, Population and Housing) and would not introduce new school-age children to the area's school districts. If there are any school-age children introduced to the area that would be newly enrolled in area school districts, the number would be nominal and should not result in the need for new or expanded school facilities.

Nonetheless, all residential and non-residential development projects are subject to the requirements set forth in Senate Bill 50, which requires payment of mandatory impact fees to offset any impact to school services or facilities. The provisions of Senate Bill 50 are deemed to provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other state or local laws (Government Code Section 65996). In accordance with Senate Bill 50, the Project applicant would pay its fair share of impact fees based on the amount of proposed square footage. These impact fees are required of most residential, commercial, and industrial development projects in the County. Therefore, impacts associated with school facilities would be less than significant.

Parks

Given the lack of population growth as a result of the Project, neither construction nor operation of the Project would generate new residents to the extent that new or expanded park facilities would be required. Therefore, impacts associated with park facilities would be less than significant.

Other Public Facilities

The Project would not directly or indirectly induce substantial population growth in the Project area. As such, it is unlikely that the Project would cause an increase in the use of other public facilities such as libraries and community centers. Therefore, impacts associated with libraries and other public facilities would be less than significant.

5.11 Recreation

Existing, Expanded, and New Recreation Facilities

The Project would result in the construction of three industrial warehouse and distribution buildings with no proposed recreational facilities. The Project would not directly introduce new residents to the area because no housing is proposed as part of the Project; as such, the Project would not result in new residents who would use nearby neighborhood parks, regional parks, or other recreational facilities.

The Project would not significantly increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, impacts associated with increasing recreational facilities usage would be less than significant.

The Project would not include recreational facilities or require the construction or expansion of recreational facilities, and the Project would not significantly increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, impacts associated with the construction of new or expansion of existing recreational facilities would be less than significant.

5.12 Utilities

New or Expanding Utilities

The Project would involve construction of new water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication facilities. However, these facilities would be located entirely within the Project site and would not require installation of off-site facilities, except where connections to existing utility lines within the surrounding public right-of-way may be required.

Moreover, these facilities would be constructed with standard construction techniques and in accordance with all regulatory requirements that address potential impacts associated with trenching activities and the use of heavy machinery. For example, as described previously in Section 5.5, Hydrology and Water, a SWPPP would be prepared for the Project, which would require the implementation of BMPs and pollutant control measures to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with the relocation of existing or construction of new utilities would be less than significant.

Wastewater

Wastewater generated by the Project would be treated by on-site septic tanks and associated leach fields. Septic tanks installed in the County are subject to County Ordinance Code Section 9-1100 et seq., which requires issuance of a Sanitation Permit by the San Joaquin County Environmental Health Division for the construction of a private septic system and sets forth requirements for the siting and construction of private septic systems.

Prior to issuance of a Sanitation Permit, the San Joaquin County Environmental Health Division will review the proposed septic system to ensure the Project's septic system is sufficiently sized and meets applicable development standards. As such, no determination of adequate capacity by a wastewater treatment provider is necessary to accommodate the Project. Impacts with regard to wastewater treatment would be less than significant.

Solid Waste and Related Regulations

Solid waste generated in the Project area is collected and transported by the County's contract waste hauler, Tracy Disposal Service. The City of Tracy's solid waste is taken to the Tracy Material Recovery Facility and Transfer Station on South MacArthur Drive before being sent to the Foothill Sanitary Landfill. The California Department of Resources Recycling and Recovery publishes solid waste generation rates based on land use types. According the California Department of Resources Recycling and Recovery, manufacturing/warehouse uses generate 1.42 pounds of solid waste per 100 square feet per day (CalRecycle n.d.). Based on these generation rates, operation of the proposed

678,913 total square feet of warehouse uses could generate solid waste at a rate of approximately 9,640 pounds of solid waste (approximately 4.8 tons) per day.³

The Tracy Material Recovery Facility has a daily intake capacity of 1,800 tons of solid waste and on average takes in 354 tons per day (CalRecycle 2020a). The maximum permitted daily throughput of the Foothill Sanitary Landfill is 1,500 tons per day. This facility has a permitted capacity of 138 million cubic yards and has a remaining capacity to accommodate 125 million cubic yards of solid waste. Current permits indicate a closure in 2082 (CalRecycle 2020b). Given that both the Tracy Material Recovery Facility and the Foothill Sanitary Landfill have ample remaining capacity to accept additional solid waste, the Project's solid waste generation would represent only a nominal percentage of these facilities' permitted daily throughput and permitted capacities. Therefore, impacts associated with permitted landfill capacity would be less than significant.

All collection, transportation, and disposal of solid waste generated by the Project would comply with all applicable federal, state, and local statutes and regulations. Under Assembly Bill (AB) 939, the Integrated Waste Management Act of 1989, local jurisdictions are required to develop source reduction, reuse, recycling, and composting programs to reduce the amount of solid waste entering landfills. Local jurisdictions are mandated to divert at least 50% of their solid waste generation into recycling. The Project would be required to submit plans to the County's Public Works Department for review and approval to ensure the plan would comply with AB 939.

In addition, the state set a goal of 75% recycling, composting, and source reduction of solid waste by 2020. To help reach this goal, the state adopted AB 341 and AB 1826. AB 341 is a mandatory commercial recycling bill, and AB 1826 is mandatory organic recycling. Waste generated by the Project would enter the County's waste stream but would not adversely affect the County's ability to meet AB 939, AB 341, or AB 1826, since the Project's waste generation would represent a nominal percentage of the waste created within the County. The Project, much like other projects, would be required to comply with these solid waste provisions during construction and operational phases. Therefore, impacts associated with solid waste disposal regulations would be less than significant.

5.13 Wildfire

Impairment of Emergency Response Plan or Emergency Evacuation Plan

CAL FIRE has designated areas south and southwest of the Project site as being within a Moderate FHSZ within a Local Responsibility Area (CAL FIRE 2020). In addition, some undeveloped hillside areas in the Diablo Mountains south of I-580, approximately 3.7 miles southwest of the Project site, are designated as being within a High FHSZ within an SRA (CAL FIRE 2020). These ratings do not extend to the Project site, and the Delta Mendota Canal separates the Project site from these areas to the south, which could function as a firebreak in the event of a wildfire, further lessening the potential for wildfire to affect the Project site.

As such, the Project site is not in or near land classified as a Very High FHSZ, and impacts associated with wildfire in or near SRAs or lands classified as Very High FHSZs are not anticipated. Notwithstanding, as discussed in Section 5.4, Hazards and Hazardous Materials, the Project would not significantly affect emergency response or evacuation activities, and the Project would not conflict with or impair implementation of the County's or City of Tracy's emergency operations plans (County of Joaquin 2019b). Therefore, impacts associated with adopted emergency response plans or evacuation plans would be less than significant.

³ This estimate does not account for diversion of recyclables from the solid waste stream and, thus, should be considered a conservative projection.

Exacerbate Wildfire Risks

The Project site is not located within or near SRAs or lands classified as Very High FHSZs. The Project site is located in an area that is generally flat, lacking any steep slopes, and characterized as predominately agricultural and industrial; these factors are not typically associated with the uncontrolled spread of wildfire. Therefore, impacts associated with the spread of wildfire would be less than significant.

Installation or Maintenance of Associated Infrastructure

The Project site is not located within or near SRAs or lands classified as Very High FHSZs. Although the Project would not involve construction of fuel breaks or power lines, the Project would involve installation of infrastructure, including water, wastewater treatment, and storm drainage facilities.

In addition, the Project would involve installation of a 500,000-gallon aboveground water storage tank and fire hydrants throughout the site for fire suppression purposes. These facilities would be located entirely within the Project site and would not exacerbate fire risk. On the contrary, the Project's water system would assist in fire suppression efforts in the event of a fire. Installation of this infrastructure would be typical of development within the greater Project area and would not require the use of specialized techniques or machinery that would result in temporary or ongoing impacts beyond those impacts discussed within this EIR. Any impacts associated with the installation of this infrastructure would be done in compliance with existing regulatory requirements, such as SWPPP requirements, that would reduce potential impacts associated with construction of these facilities to below a level of significance. Therefore, impacts associated with infrastructure exacerbating fire risk would be less than significant.

Expose Structures or People to Significant Risks

The Project site is not located within or near SRAs or lands classified as Very High FHSZs. As discussed in Section 5.3, Geology and Soils, and Section 5.5, Hydrology and Water Quality, the Project would not result in significant risks associated with flooding, landslides, runoff, or drainage changes, and the Project does not propose the use of fire (such as for a controlled vegetation burn) that would result in post-fire slope instability. Therefore, impacts associated with runoff, post-fire slope instability, and drainage changes would be less than significant.

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6 Other CEQA Considerations

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project (refer to Chapter 4, Environmental Analysis, of this Draft EIR), (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) growth-inducing impacts of the proposed project, and (5) alternatives to the proposed project (refer to Chapter 7, Alternatives, of this Draft EIR).

6.1 Growth-Inducing Impacts

As stated in Section 15126.2(e) of the CEQA Guidelines, an EIR is required to include a discussion of a project's growth-inducing effects. The CEQA Guidelines generally describe such effects as (1) economic growth, population growth, or additional housing in the surrounding environment; (2) removal of obstacles to population growth (e.g., a major expansion of a wastewater treatment facility that allows for more construction in the service area); (3) increases in population that tax existing services requiring construction of new facilities that could cause significant environmental effects; and (4) characteristics of a project that would encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

For the 14800 W. Schulte Road Logistics Center (Project), a temporary workforce would be needed to construct the new buildings and related on-site improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction. These short-term positions are anticipated to be filled primarily by construction workers who reside in the Project area. Therefore, construction of the Project would not generate a temporary increase in population within the Project area.

Once the Project is operational, the Project would not directly result in the addition of new residents to the area, because the Project would not involve residential development. Based on typical employee densities for warehousing and distribution uses, it is expected that the Project would result in approximately 555 employment opportunities. The additional employees may come from the Project area; however, this analysis conservatively assumes that all 555 new employees would relocate to the Project area.¹

In its General Plan, the County of San Joaquin (County) notes that it is anticipated to add 51,000 new jobs through 2035 for a total 271,685 jobs in the County by 2035. Projections for employment growth under the 2035 General Plan are relatively consistent with San Joaquin Council of Governments projections that there would be 282,613 jobs within the County by 2035 (County of San Joaquin 2016; SJCOG 2014). Given these anticipated employment projections, the Project's 555 new employees would represent a relatively small percentage of new employment projections in the County. In addition, given the non-managerial nature of most of the future employment opportunities provided on site, it is anticipated that future employees would not relocate into the area to work at

¹ For purposes of this analyses, employment estimates were calculated using average employment density factors reported by Southern California Association of Governments (SCAG). SCAG reports that for every 1,225 square feet of warehouse space in the Southern California region (including Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial counties), the median number of jobs supported is one employee (SCAG 2001). Although these estimates are based on data collected in Southern California, they are appropriate for use in Northern California because employment density rates as they pertain to the warehouse/industrial industry are primarily a function of the use and are not typically location-dependent. The Project would include approximately 678,913 square feet of flexible industrial space. As such, the estimated number of employees required for operation would be approximately 555 persons.

the Project, and instead, these largely non-managerial positions would primarily be filled by the local labor force. Therefore, the Project would not directly stimulate unplanned population growth or population concentration above what is assumed in local and regional land use plans.

Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in an area. However, the Project would not involve development of infrastructure or roadways that could indirectly lead to population growth. Although street improvements are planned as part of the Project, including beautification/landscaping along the Project frontage, the Project would not extend an existing roadway facility into an area that is not currently provided vehicular access. As a result, the Project would not result in indirect population growth by providing vehicular access to an area presently lacking such access.

Further, the Project would not require installation of new or the upsizing of existing domestic water lines, storm drain lines, or sewer lines in the Project vicinity. Instead, a new stormwater drainage system, including on-site detention basins, would collect and treat stormwater on the Project site without the need to connect to a municipal stormwater system. In addition, domestic, irrigation, and fire suppression water would be sourced on the Project site through installation of two on-site water wells, and wastewater generated by each of the three buildings would be directed to individual on-site septic tanks and associated leach fields; thus, the Project would not have to connect to the municipal water or wastewater system, and no upsizing to these municipal utilities would be required. As such, by not constructing new or upsizing existing stormwater, water, or wastewater infrastructure in the Project area, the Project would not indirectly induce growth or serve as a catalyst for future unrelated development in the area.

Based on the proximity of the Project site to existing and future facilities, and the fact that the Project site is already located within services areas for the South San Joaquin County Fire Authority and San Joaquin County Sheriff's Department, the Project would be adequately served by public services without the construction of new, or the expansion of existing, facilities. Although the Project could potentially result in an incremental increase in calls for service to the Project site compared to existing conditions, this increase is expected to be nominal (as opposed to new residential or commercial/retail land uses, which do result in greater increases in calls for service) and would not result in the need for new or expanded fire or police facilities. Also, since the Project would not directly or indirectly induce unplanned population growth in the County, it is not anticipated that many people would relocate to the County as a result of the Project, and an increase in school-age children requiring public education is not expected to occur as a result. Thus, the need for new or expanded school facilities would not be required.

In conclusion, the Project could cause population growth through new job opportunities, but this growth falls well within County and regional growth projections for population and housing. The Project would not remove obstacles to population growth and would not cause an increase in population such that new community facilities or infrastructure would be required outside of the Project site. Finally, the Project is not expected to encourage or facilitate other activities that could significantly affect the environment, as explained above. For these reasons, the Project would not be significantly growth inducing.

6.2 Significant Irreversible Changes

The CEQA Guidelines requires that an EIR address any significant irreversible changes that would be caused by implementation of a project. According to CEQA Guidelines Section 15126.2(c), such a change would involve one or more of the scenarios discussed below.

6.2.1 Change in Land Use that Commits Future Generations to Similar Uses

As discussed in Chapter 5, Effects Found Not to Be Significant, of this Draft EIR, the Project is consistent with the Project site's General Plan land use designation and zoning. As such, although construction of the Project would develop the 37.96-acre Project site with industrial/warehouse space, the County already committed the site to industrial/warehouse (and similar) uses when the County General Plan and Development Title identified this site for industrial uses.

The Project site is located within an area containing a mix of agricultural and industrial uses. Specifically, it is bounded by Schulte Road and agricultural uses to the north, Quality Road and agricultural uses to the east, a manufacturing/warehouse use to the south, and a warehouse/distribution use to the west. Regional access to the Project site is provided by Interstate (I) 580 and I-205, located approximately 1.5 miles to the southwest and north, respectively, and I-5, located approximately 8 miles to the east. Because the Project site is located near and adjacent to existing urbanized uses, including other industrial uses, the Project would not result in land use changes that would commit future generations to uses that do not already occur in the Project area. Thus, implementation would not commit future generations to similar uses, given that the proposed use is already found within the Project area and within the broader County region.

6.2.2 Irreversible Damage from Environmental Accidents

Potential environmental accidents of concern include those events that would adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release. Construction activities associated with the Project would involve some risk of environmental accidents. However, these activities would be conducted in accordance with all applicable federal, state, and local regulations, and would follow professional industry standards for safety. Once operational, any materials associated with environmental accidents would comply with applicable federal, state, and local regulations. Use of any such materials would not adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release.

6.2.3 Large Commitment of Nonrenewable Resources

Commitment of nonrenewable resources includes issues related to increased energy consumption, loss of agricultural lands, and lost access to mining reserves. There would be an irretrievable commitment of labor, capital, and materials used during construction and operation of the Project. Nonrenewable resources would primarily be committed in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the Project. Consumption of other non-renewable or slowly renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

To ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (California Public Resources Code [PRC] Section 21100[b][3]). Energy conservation implies that a project's cost-effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost-effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving a project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Consistent with PRC Section 21100(b)(3), Appendix G of the CEQA Guidelines, and a ruling set forth by the court in *California Clean Energy Committee v. City of Woodland*, potentially significant energy implications of a project must be considered in an EIR to the extent relevant and applicable to that project. Accordingly, based on the energy consumption thresholds set forth in both Appendix F and Appendix G of the CEQA Guidelines, the Project's estimated energy demands (both short-term construction and long-term operational demands) were evaluated (see Section 4.4, Energy, of the this Draft EIR). The overall purpose of the energy analysis was to evaluate whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy.

As further assessed in the energy analysis, for new development, such as that proposed by the Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy. The Project would provide for and promote energy efficiencies beyond those required under other applicable federal and state standards and regulations, and in so doing would meet or exceed all Title 24 standards. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

6.3 Significant and Unavoidable Impacts

Pursuant to CEQA Guidelines Section 15126.2(b), an EIR must address any significant environmental impacts, including those that can be mitigated but not reduced to less than significant as a result of implementation of a project.

As discussed in the Section 4.1, Air Quality, of this Draft EIR, at the project and cumulative levels, operation-generated emissions would exceed the San Joaquin Valley Air Pollution Control District's threshold of significance for oxides of nitrogen (NO_x). Even with incorporation of the mitigation identified in this Draft EIR, operation NO_x emissions would still exceed San Joaquin Valley Air Pollution Control District's threshold, and impacts would be significant and unavoidable. For all other environmental issue areas, the Project would result in either less-than-significant impacts or no impact.

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7 Alternatives

7.1 Alternatives to the Proposed Project

In accordance with California Environmental Quality Act (CEQA) Section 15126.6, this chapter of the Draft Environmental Impact Report (EIR) contains a comparative evaluation of the 14800 W. Schulte Road Logistics Center (Project) with alternatives to the Project, including the mandatory No Project Alternative. Consistent with CEQA Section 15126.6, this chapter focuses on alternatives to the Project that are capable of avoiding or reducing any significant adverse impacts associated with the Project, even if the alternatives may impede attainment of Project objectives or prove less cost efficient. In addition, implementation of a Project alternative may potentially result in new impacts or mitigation requirements that would not have resulted from the Project.

The CEQA Guidelines require that the analysis of alternatives provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with a proposed project. Specifically, CEQA Guidelines Section 15126.6(a) outlines the scope of alternatives to a proposed project that must be evaluated:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

Under case law and CEQA Guidelines Section 15126.6(f), the discussion of alternatives is subject to a rule of reason and need not be exhaustive. CEQA Guidelines Section 15126.6(d) states that “if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed.” Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Guidelines Section 15364 defines “feasibility” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” An EIR need not consider a project alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or whose execution does not substantially lessen or avoid the significant effects of a proposed project.

As discussed in the Section 4.1, Air Quality, of this Draft EIR, at the Project and cumulative levels, operation-generated emissions would exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) threshold of significance for oxides of nitrogen (NO_x). Even with the incorporation of mitigation identified in this Draft EIR, operation NO_x emissions would still exceed SJVAPCD’s threshold, and impacts would be significant and unavoidable. For all other environmental issue areas, the Project would result in either less-than-significant impacts or no impact.

7.2 Project Alternatives Considered and Rejected

An EIR is required to identify any alternatives that were considered by the lead agency but were rejected as infeasible. Among the factors described by CEQA Guidelines Section 15126.6 in determining whether to exclude alternatives from detailed consideration in an EIR are failure to meet most of the basic objectives of a proposed project, infeasibility, or inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to a proposed project, CEQA Guidelines Section 15126.6(t)(l) states the following:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries ... and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

In determining an appropriate range of Project alternatives to be evaluated in this Draft EIR, a number of possible alternatives were initially considered and then rejected. Project alternatives were rejected because they could not accomplish the basic objectives of the Project; they would not have resulted in a reduction of significant adverse environmental impacts; or they were considered infeasible to construct or operate.

Alternative Land Uses

Alternative land uses for the Project site, including residential, commercial/retail, mixed use, and/or recreational facilities, were considered and rejected because these land uses are not consistent with the underlying designations of the Project site. The County of San Joaquin (County) General Plan Land Use Map designates the Project site as General Industrial (County of San Joaquin 2016), and the County's Zoning Map identifies the site for General Industrial (I-G).

According to the County's General Plan, the General Industrial Zone is intended to provide for a full range of industrial activities whose location and operation tend to have moderate to high nuisance characteristics, and therefore, require segregation from other land uses (County of San Joaquin 2016). Typical uses include manufacturing, distribution, storage, and wholesaling. Similarly, the I-G Zone is intended to provide for a wide range of manufacturing, distribution, and storage uses. This zone is intended to implement the General Industrial land use category of the General Plan. According to the County's General Plan, specific uses allowed in the industrial category range from flex/office space to manufacturing to warehousing and distribution. Land uses that deviate from industrial-based activities, including residential, commercial/retail, mixed use, and/or recreational facilities, are not identified as allowable or permitted by the underlying designations of the County (County of San Joaquin 2016).

Without approval of a General Plan Amendment and zone change, which are discretionary approvals and not being requested at this time, residential, commercial/retail, mixed-use, and recreational land uses cannot be developed on the Project site. In addition, given the proximity of other existing industrial uses in both the immediate and broader Project area, most uses other than industrial and manufacturing would likely not be compatible with the neighboring industrial operations; thus, the Project site would be an undesirable location for residential, commercial/retail, mixed-use, and recreational land uses. Additionally, an alternative land use project would fail to meet most, if not all, of the Project objectives. Therefore, alternative land uses are rejected from further consideration.

Alternative Locations

CEQA does not require that an analysis of alternate sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternate site, then a project alternative should be considered and analyzed in the EIR. Pursuant to CEQA Guidelines Section 15126.6(f)(2), in making the decision to include or exclude analysis of an alternate site, the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR.”

As discussed in Chapter 5, Effects Found Not to Be Significant, the Project is consistent with the County’s General Plan and Ordinance Code. An analysis of alternate sites is typically not necessary when a proposed project is consistent with the applicable land use plans and policies because it can be reasonably assumed that development would ultimately occur in conformance with the applicable land use designation, whether by the proposed Project or by another future development project. It should be noted that although the Project site is currently undeveloped, the Project site was previously developed for industrial/energy use. In cases where a proposed project is consistent with the applicable General Plan land use designation, the alternatives analysis should typically focus on options for developing the property consistent with adopted plan policies, and the discussion of alternatives should search for an environmentally superior version of a proposed project on the selected site instead of an alternate site.

Few other vacant, development-ready properties of similar size as the Project site are available in the County or neighboring cities that would offer less developmental and environmental constraints, or fewer physical environmental impacts, than the current site. Development of the Project in an alternate location would have similar impacts as would occur with implementation of the Project at its proposed location. Thus, moving the Project to an alternative site—assuming that another approximately 37-acre property exists within the Project area and is available—would merely displace environmental impacts instead of avoiding or minimizing them.

At this time, the Project applicant does not own or control extraneous land in or around the Project area that could accommodate implementation of the Project. A search of similarly sized, available properties within and near the Project site failed to find any industrial-zoned, similarly sized, vacant sites that are currently on the market and available to purchase (LoopNet 2021). Other vacant areas located farther north of the Project site are located within and near the City of Stockton. While these areas may serve as alternative sites for the Project, these vacant sites are either substantially larger than the Project site or partially developed within a harbor. Consequently, this Draft EIR does not address these alternative locations.

Further, if the alternate site were to be located farther from major regional transportation routes (e.g., Interstate 580), operational impacts associated with traffic congestion, truck noise, and truck trip-generated air emissions would likely be greater than those associated with the Project and disclosed in this Draft EIR, as the vehicles would need to travel farther on local roads to reach the regional highway system.

While an alternative location may meet most of the Project objectives, given the above discussion, an alternative location was rejected from further consideration.

Substantially Reduced Intensity Alternative

As discussed throughout Chapter 4, Environmental Analysis, except for significant and unavoidable operational air quality impacts, the Project would result in less-than-significant impacts or no impact, with and without implementation of mitigation measures. As such, an alternative that would avoid this operational air quality impact was considered.

As discussed in Section 4.1, Air Quality, operation-generated NO_x emissions would exceed the SJVAPCD threshold of significance, even with incorporation of Mitigation Measure (MM-) AQ-1 through MM-AQ-3. These operation-generated NO_x emissions are primarily from mobile sources associated with vehicle emissions from employees and truck trips. To fully avoid this operational air quality impact, the Project would require a substantial reduction in size to approximately 35% of the currently proposed Project square footage. Such a reduction in scale of the Project may meet most of the Project objectives, but to a substantially less degree than the Project. Additionally, this reduction would not maximize the use of the previously developed, underutilized Project site (Objective 3).

Therefore, given this level of Project size reduction would fail to fully meet any of the Project objectives, and largely because a 65% reduction in the Project's size would clearly make this alternative infeasible for the Project applicant, this alternative was rejected from further consideration. (Note that a Reduced Development Intensity Alternative, which assumes a more reasonable reduction in Project size, is considered in Section 7.3.3, below).

7.3 Project Alternatives Under Further Consideration

The following provides analysis of the No Project/No Development Alternative (Alternative 1) and the two build alternatives: No Project/Other Development Project Alternative (Alternative 2) and Reduced Development Intensity Alternative (Alternative 3).

The evaluation below provides a relative comparison between the Project and each of the three Project alternatives. The analysis considers the issue areas evaluated in Chapter 4, Environmental Analysis, and Chapter 5, Effects Found Not to Be Significant, of this Draft EIR. In many cases, the Project and a Project alternative may share the same level of significance (i.e., both scenarios would result in a less-than-significant impact). However, although they might share the same level of significance under CEQA, the actual degree of impact may be slightly different for each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts compared to the Project.

An environmentally superior alternative is identified among the alternatives evaluated in this Draft EIR. An alternative would be environmentally superior to the Project if it would result in fewer or less significant environmental impacts while achieving most of the Project objectives.

7.3.1 No Project/No Development Alternative (Alternative 1)

Description of Alternative 1

Under Alternative 1, construction of the Project would not occur. The Project site would remain unchanged, and development activities related to construction and operation of the proposed industrial/warehouse buildings, associated office spaces, surface parking and loading areas, and all other proposed on- and off-site improvements would not occur. This alternative assumes that the Project site would remain in its current vacant and undeveloped state for the foreseeable future.

Alternative 1 Impact Analysis

Under Alternative 1, the Project site would remain unchanged and would remain a vacant, undeveloped, yet disturbed property. On-site conditions would remain similar to existing conditions, and because development activities associated with the Project would not occur, all environmental impacts would be reduced or avoided compared to the Project.

Alternative 1 would not require or result in construction or operation of industrial or other land uses at the Project site. Implementation of this alternative would not result in any air quality and greenhouse gas (GHG) emissions, or energy use during construction or operation. No new temporary or permanent sources of noise or vibration would be introduced onto the site. Alternative 1 would not generate any temporary or permanent vehicle trips at the Project site and on the surrounding roadway network. This alternative would also not require the use of local or regional water supplies.

As construction would no longer occur at the Project site under this alternative, the potential for inadvertent discovery of cultural and tribal cultural resources (TCRs) would be avoided. Similarly, Alternative 1 has no potential to impact sensitive biological resources as construction and operation of industrial uses at the Project site would no longer occur.

Alternative 1 Conclusion and Relation to Project Objectives

Mitigation to reduce impacts to air quality, cultural resources, TCRs, and biological resources, which would be required of the Project, would no longer be necessary under Alternative 1. The Project's significant and unavoidable operational air quality impact would be avoided under this alternative. Overall, the Alternative 1 would not result in any significant impacts. However, Alternative 1 would also not meet any of the Project Objectives.

7.3.2 No Project/Other Development Alternative (Alternative 2)

Description of Alternative 2

Under Alternative 2, the Project site would be redeveloped with other land uses, consistent with the underlying industrial designations and zoning.

According to the County's General Plan, the General Industrial Zone is intended to provide for a full range of industrial activities whose location and operation tend to have moderate to high nuisance characteristics, and therefore, require segregation from other land uses (County of San Joaquin 2016). Typical uses include manufacturing, distribution, storage, and wholesaling. Similarly, the I-G Zone is intended to provide for a wide range of manufacturing, distribution, and storage uses.

It is assumed that Alternative 2 would involve development of a land use that would be permissible either by right or by Site Approval, Special Purpose Plan, Improvement Plan, or Use Permit, including the aforementioned land uses listed above. It is also assumed that those uses would share a similar development intensity/floor-area-ratio/site coverage as the Project. Land uses that are expressly not allowed in the I-G zone—specifically residential—would not be considered under Alternative 2.

As previously described, the underlying I-G zone provides for a full range of industrial uses and similar activities. Uses under Alternative 2 could include agricultural sales, auction yards, automotive rentals and repair, light and heavy construction services, manufacturing, heavy equipment sales and repair, heavy and hazardous materials industry, recycling services, truck sales and repair, vehicle storage, and utility services. Given that the Project buildings are intended to be used for light warehousing and distribution uses as defined by the San Joaquin County Ordinance Code (Section 9-115.585), Alternative 2 could include substantially more intensive industrial uses when compared to the Project.

Alternative 2 Impact Analysis

It is assumed that Alternative 2 would involve construction and operation of a land use of similar or greater development and operational intensity as the Project, would have a similar floor-area-ratio as the Project, and would be subject to the same federal, state, and local requirements as the Project. Thus, it is expected that most environmental impacts associated with Alternative 2 would be similar—if not identical—to those environmental impacts resulting from implementation of the Project.

In addition, while many uses under this alternative would likely result in a similar number of average vehicle trips as the Project, other allowable land uses could result in a higher daily or peak trip rate, including administrative offices and automotive rental/repair. Thus, there would be a potential for increased impacts associated with operational air quality/GHG emissions and traffic noise under Alternative 2. Despite potential for an increase in generated trips, Alternative 2 would likely also be screened out from further vehicle miles traveled (VMT) analysis based on its location in a low VMT generating traffic analysis zones.

Allowable uses under the I-G zone include more intensive industrial uses when compared to the warehouse and distribution buildings proposed under the Project. Such uses, including heavy equipment/truck repair, manufacturing, and recycling services could require the use of more energy or water supply and generate greater noise levels during operation when compared to the Project.

Alternative 2 Conclusion and Relation to Project Objectives

It is likely that all or most of the mitigation measures required for the Project would also apply to Alternative 2, as the land use type, development intensity, and/or site coverage would be similar or greater to the Project. There is the possibility under Alternative 2, however, that some impacts associated with air quality, GHG, energy, noise, and water may be greater than those resulting from implementation of the Project, given that some of the other allowed land uses in the I-G zone have a higher peak hour and/or daily trip generation rate or are more intensive overall.

Alternative 2 would feasibly meet all of the Project Objectives, with the exception of Objective 4 (fulfill the existing and growing demand for logistics and warehouse uses in the region). Because Alternative 2 could result in uses that are logistics/warehouses that are allowable in the I-G zone, this alternative might not meet Objective 4.

7.3.3 Reduced Development Intensity Alternative (Alternative 3)

Description of Alternative 3

CEQA Section 15126.6, requires consideration of alternatives to the Project that are capable of avoiding or substantially reducing any significant adverse impacts associated with the Project. As discussed throughout Chapter 4, Environmental Analysis, except for significant and unavoidable operational air quality impacts, the Project would result in less-than-significant impacts or no impact, with and without implementation of mitigation measures. (An alternative that would fully avoid this significant and unavoidable operational air quality impact was considered but rejected from further analysis; see Section 7.2, above).

Presently, the only feasible approach to reducing the Project's operational-related air quality impacts would be to reduce the total number of daily trips and employees generated by the Project. As such, in an effort to reduce the Project's significant and unavoidable impacts, the County considered a Reduced Development Intensity Alternative (Alternative 3).

Under Alternative 3, the same industrial distribution and warehouse buildings would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 20%. This would equate to an industrial/warehouse project consisting of approximately 543,130 square feet, compared to the Project's 678,913 square feet. Since the building footprint would be reduced by 135,782 square feet (approximately 3.1 acres), this extra space on the Project site would remain vacant and undeveloped. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 3.

Alternative 3 Impact Analysis

Air Quality

Under Alternative 3, the extent of construction activities would be incrementally reduced compared to the Project. Thus, construction-related air quality emissions would be lessened. Due to the reduction in the amount of building space, Alternative 3 would generate fewer daily vehicle trips, including heavy truck trips. Accordingly, air pollutant emissions associated with long-term operation of Alternative 3 would be lessened compared to the Project.

However, Alternative 3 would still require implementation of mitigation measures similar to those required by the Project. Because a 65% reduction in the size of the Project is required to avoid significant air quality impacts (see Section 7.2, above), even with incorporation of mitigation measures, long-term operation of Alternative 3 would still result in significant and unavoidable impacts due to emissions of NO_x. As such, Alternative 3 would reduce, but not avoid, the Project's significant and unavoidable impact due to operational air emissions.

Biological Resources

Under Alternative 3, the Project would be constructed and operated as planned on the entire Project site, although the development intensity would be reduced. Compared to the Project, Alternative 3 would develop less of the Project site, resulting in a smaller overall building footprint. However, potential impacts related to burrowing owl (*Athene cunicularia*), nesting birds, and wildlife would still occur, despite the smaller footprint under Alternative 3. Mitigation measures similar to those incorporated into the Project would be required by Alternative 3 to reduce impacts to a level below significance. Therefore, biological resources impacts would be similar under Alternative 3 when compared to the Project.

Cultural and Tribal Cultural Resources

Compared to the Project, Alternative 3 would develop less of the Project site with buildings, parking and loading areas, and other associated improvements, resulting in a smaller overall building footprint on the site that would disturb less land. Despite disturbing a smaller area, Alternative 3 would result in the same potential to disturb presently unknown/unrecorded cultural resources and TCRs within the Project site. Mitigation measures similar to those incorporated into the Project would be required by Alternative 3 to reduce impacts to a level below significance. Therefore, cultural resources and TCRs impacts would be similar under Alternative 3 when compared to the Project.

Energy

The level of construction activities would be reduced under Alternative 3 compared to the Project. Thus, construction-related energy usage would be lessened. Alternative 3 would also generate fewer daily vehicle trips and result in less building space than the Project as proposed, equating to less on-site and mobile energy consumption. Accordingly, energy usage associated with long-term operation of Alternative 3 would be lessened compared to the Project. Therefore, energy impacts would be reduced under Alternative 3 when compared to the Project.

Greenhouse Gas Emissions

Similar to air quality, the extent of construction activities would be reduced under Alternative 3 compared to the Project. Thus, construction-related GHG emissions would be lessened. Alternative 3 would also generate fewer daily vehicle trips due to the reduction in the amount of building space. Accordingly, GHG emissions associated with long-term operation of Alternative 3 would be lessened compared to the Project. Therefore, GHG emissions impacts would be reduced under Alternative 3 when compared to the Project.

Noise

Noise associated with Alternative 3 would occur during short-term construction activities and under long-term operation. The types of construction activities conducted on the Project site would be similar under Alternative 3 and would generally cover the same physical area. Despite Alternative 3 likely resulting in a reduced construction duration when compared to the Project, daily and hourly construction noise levels would be similar. Under long-term operational conditions, noise generated by Alternative 3 would primarily be associated with vehicles traveling to and from the site, and on-site vehicle idling, maneuvering, and parking. Alternative 3 would generate fewer daily trips than the Project, and, as such, would contribute less traffic-related noise to local roadways than the Project. Therefore, noise impacts would be reduced under Alternative 3 when compared to the Project.

Transportation

VMT is largely dependent on the specific land use type of a particular project and the location of that project. While a reduction in a project's size could reduce the overall VMT associated with a given project, reducing a project's square footage would not necessarily have an effect on a project's average trip length. Thus, while under Alternative 3 the Project's development footprint would be reduced by 20% compared to the Project, the average trip length for passenger vehicle and truck trips associated with the Project would essentially remain constant. Similar to the Project, Alternative 3 would be screened out from further VMT analysis based on its location in a low VMT-generating traffic analysis zone. Therefore, transportation impacts would be similar under Alternative 3 when compared to the Project.

Water

Given the reduced scale of construction, Alternative 3 would require less overall temporary water supply compared to the Project. Similarly, the reduced building square footage, operational intensity, and employees of Alternative 3 would result in less long-term water demand when compared to the Project. Therefore, water impacts would be reduced under Alternative 3 when compared to the Project.

Alternative 3 Conclusion and Relation to Project Objectives

Based on the above, Alternative 3 would result in incremental reductions in both construction activity and operational intensity, resulting in corresponding reductions in the severity of impacts related to air quality, energy, GHG, noise, and water. In the case of air quality, impacts under Alternative 3 would remain significant and unavoidable even with incorporation of mitigation measures.

All of the same mitigation measures required for the Project would be necessary for Alternative 3, although no new measures would be required. Additionally, Alternative 3 would meet all Project objectives, albeit to a lesser extent as proposed under the Project because of the 20% reduction in the Project's size. In particular, because of its reduced size, Alternative 3 would produce fewer jobs (Objectives 1 and 3), would generate less tax revenue (Objectives 1 and 3), would not maximize the use of an underutilized site (Objective 3), and would not fulfill the growing demand for warehouses in the region (Objective 4) to the same degree as the Project.

7.4 Environmentally Superior Alternative

Section 15126(e)(2) of the CEQA Guidelines requires an EIR to identify an “environmentally superior alternative.” If the No Project/No Development Alternative is the environmentally superior alternative, which is the case in this analysis, the EIR must also identify an environmentally superior alternative from among the other Project alternatives.

Table 7-1 provides a comparison of the Project with the Project alternatives based on the environmental topic areas addressed in Chapter 4, Environmental Impact Analysis, of this Draft EIR. As shown in Table 7-1, Alternative 3 is considered the environmentally superior alternative. Table 7-2 presents how the Project and each of the Project alternatives compare in terms of meeting the Project objectives.

Table 7-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/No Development Alternative (Alternative 1)	No Project/Other Development Project Alternative (Alternative 2)	Reduced Development Intensity Alternative (Alternative 3)
Air Quality	Significant and Unavoidable	Avoided	Greater	Reduced, but significant and unavoidable impacts remain
Biological Resources	Less Than Significant with the Incorporation of Mitigation	Avoided	Similar	Similar
Cultural and Tribal Cultural Resources	Less Than Significant with the Incorporation of Mitigation	Avoided	Similar	Similar
Energy	Less Than Significant	Avoided	Greater	Reduced
Greenhouse Gas Emissions	Less Than Significant	Avoided	Greater	Reduced
Noise	Less Than Significant	Avoided	Greater	Reduced
Transportation	Less Than Significant	Avoided	Similar	Similar
Water	Less Than Significant	Avoided	Greater	Reduced

Table 7-2. Comparison of Project Alternatives and Project Objectives

Project Objective	Would the Project or Alternative Meet the Project Objective?			
	Project	No Project/No Development Alternative (Alternative 1)	No Project/Other Development Project Alternative (Alternative 2)	Reduced Intensity Alternative (Alternative 3)
Objective 1: Develop a jobs-producing and tax-generating land use near transportation corridors within San Joaquin County that provides diverse economic opportunities for those residing and wishing to invest within southern San Joaquin County.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project
Objective 2: Concentrate non-residential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, and industrial noise to the greatest extent feasible.	Yes	No	Yes	Yes
Objective 3: Develop a fiscally sound and employment generating land use that maximizes utilization of an underutilized, previously developed industrially zoned parcel.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project
Objective 4: Fulfill the existing and growing demand for logistics and warehouse uses in the region.	Yes	No	No	Yes, albeit to a lesser degree than the Project
Objective 5: Construct high quality industrial development in an appropriate location, consistent with existing surrounding industrial land uses in the vicinity.	Yes	No	Yes	Yes

7.5 References Cited

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