INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

CITY OF LEMOORE

HELENA CHEMICAL PLANT EXPANSION PROJECT

Comments must be received by: April 5, 2021 (20 days after notice)

MARCH 2021

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

HELENA FERTILIZER PLANT PROJECT

Prepared for:

City of Lemoore
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Lemoore, CA 93245
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March 2021

Project #20002.02

NOTICE OF INTENT TO ADOPT
MITIGATED NEGATIVE DECLARATION

This is to advise that the City of Lemoore has prepared a Mitigated Negative Declaration for the project identified below that is scheduled to be considered at the Planning Commission's regular meeting on April 12, 2021. The meeting will be held at 7:00 p.m. at the Lemoore Council Chambers, 429 C Street, Lemoore, CA.

Due to the current Shelter-in-Place Order covering the State of California and the Social Distance Guidelines issued by Federal, State, and Local Authorities, physical attendance by the public cannot be accommodated given the current circumstances and the need to ensure the health and safety of the City Council, City staff, and the public as a whole. All upcoming regular and special City Council meetings will ***only be accessible online at*** www.Youtube.com/c/cityoflemoore .

Project Title: Helena Fertilizer Plant Project

Project Location: The proposed site is in Section 5, Township 19 South, Range 20 East, Mount Diablo Base and Meridian, within the incorporated City of Lemoore, County of Kings, California. The project site is located south of Industry Way, east of Production Place, west of Belle Haven Drive and State Route (SR) 41. The project site includes Assessor's Parcel Numbers 023-520-008 and 023-510-044, which totals approximately 31 acres.

Project Description: Helena Agri-Enterprises, LLC proposes the construction of a new facility on approximately 31 acres. The proposed use includes the storage, blending, and sale of bulk and prepackaged dry and liquid fertilizer along with the storage of agricultural protection products. This proposal will allow Helena to consolidate three existing operations in the Hanford area to a single site that is intended to increase operational efficiencies and better serve their customers.

The document and documents referenced in the Initial Study/Mitigated Negative Declaration are available for review at the City of Lemoore Community Development Department at 711 West Cinnamon Drive, Lemoore, CA 93245. Persons wishing to review information on file must contact staff by phone at (559) 924-6744. Ext. 740 or by email at planning@lemoore.com to make arrangements. Due to the limits mandated by State law, mailed responses must be filed with the City Clerk's office, City of Lemoore, 711 W. Cinnamon Drive, Lemoore CA 92345 no later than April 5, 2021, at 5:00 p.m.

Persons having comments or concerns about the proposed project ***must submit your public comments by e-mail to***: planning@lemoore.com. ***In the subject line of the e-mail, please state your name and the item you are commenting on.*** Persons unable to email comments may send them via USPS mail or other courier to City of Lemoore, Attn: Community Development Department, 711 W. Cinnamon Drive, Lemoore CA 93245. Mailed comments must be received by 5:00 p.m. the day of the meeting to be entered into record.

As mandated by the California Environmental Quality Act (CEQA), the public review period for this document is 20 days (CEQA Section 15073[b]). The public review period begins on March 17, 2021 and ends on April 5, 2021. For further information, please contact Judy Holwell at (599) 924-6744.

Published in Hanford Sentinel: March 18, 2020

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MITIGATED NEGATIVE DECLARATION

As Lead Agency under the California Environmental Quality Act (CEQA), the City of Lemoore reviewed the project described below to determine whether it could have a significant effect on the environment because of its development. In accordance with CEQA Guidelines Section 15382, "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Project Name

Helena Fertilizer Plant Project

Project Location

The proposed site is in Section 5, Township 19 South, Range 20 East, Mount Diablo Base and Meridian, within the incorporated City of Lemoore, County of Kings, California. The project site is located south of Industry Way, east of Production Place, west of Belle Haven Drive and State Route (SR) 41. The project site includes Assessor's Parcel Numbers 023-520-008 and 023-510-044, which totals approximately 31 acres.

Project Description

Helena Agri-Enterprises, LLC proposes the construction of a new facility on approximately 31 acres of undeveloped land. The proposed use includes the storage, blending, and sale of bulk and prepackaged dry and liquid fertilizer along with the storage of agricultural protection products. This proposal will allow Helena to consolidate three existing operations in the Hanford area to a single site that is intended to increase operational efficiencies and better serve their customers (project). These three locations and their cumulative activities are the minimum estimated activities at the new site. The proposed project is consistent with current land use plans and zoning but requires the approval of a Major Site Plan Review.

CONSTRUCTION

The project is proposed to be constructed in two phases.

Phase 1 will include the following:

- A truck/tank rinse pad with an area of 2,700 square feet (sf; location to be determined),
- A 10 sf x 70 sf truck scale,
- A 4,200 sf office,
- A 6,300 sf shop,
- A 40,500 sf warehouse,

- A 9,400 area for tank containment with four 500,000-gallon self-contained tanks (approximately 670,000 gallons of liquid fertilizer),
- A 36,600-square-foot bulk dry fertilizer warehouse (approximately 16,665 tons), and
- Construction of approximately 3,800 feet of railroad tracks.

Phase 2, constructed when market justifies the expansion, will include:

- A 2,400 sf office,
- A 5,500 sf tank farm (approximately 450,000 gallons),
- A 13,600 sf bulk dry fertilizer warehouse (6,000 tons),
- A 30,000 sf warehouse,
- Two 500,000-gallon self-contained storage tanks, and
- 790 feet of railroad tracks.

OPERATIONS

Helena's operations will include the storage and blending of liquid and dry fertilizer. The liquid and dry fertilizer is transported to the site via trucks or by rail. When liquid fertilizer is delivered to the site, it is offloaded from the tanker truck on a contained load pad and dispensed into the appropriate above ground storage tank by means of hoses, pumps, and a network of plumbing. The connection points, from the transport vehicle to the pump, utilize drip pans to capture any residual material that may develop after disconnecting the hoses. This will eliminate the need to wash the concrete load pads. If and when water accumulates at a load pad, the water will be captured and transferred to a vessel. The vessel will be furnished to a customer who will apply the product per the label.

When dry fertilizer is delivered to the facility by truck, it is offloaded into a conveyor. The conveyor moves the product from ground level to the top of the warehouse and is distributed to the appropriate interior area. All of the dry fertilizer is transferred in enclosed equipment and inside of a building except for the initial two-foot drop point from the belly of the trailer to the conveyor. The two-foot drop point will utilize a choke feed method to reduce dust and spillage. Any material that accumulates on the concrete aprons will be swept and placed in the product pile at the end of the unloading process. If the fertilizer is delivered by rail, the same process occurs as described above for both liquid and dry fertilizer products.

Dry and Liquid Fertilizer

All of the liquid and dry fertilizer are delivered to the customer by means of a full-size truck (80,000 GVWR) or a two-ton truck with a trailer (32,000 GVWR). The operations for loading vessels of sold products to Helena's customers are as follows:

LIQUID FERTILIZER – STORED IN TANKS

The liquid fertilizer can be loaded by two different methods. The first and most common way to load a truck is through a liquid blender which is equipped with load cells to weigh each product. Helena staff will issue a blend ticket for the customer's specific nutrient needs that

consists of two or more previously prepared products. The ticket information is inputted into an automated screen that will dispense, blend and loadout the product by means of pumps, a manifold, and a network of plumbing. The manifold is connected to all of the tanks but through valves on the manifold remain separate.

The second means to load a vessel is through a flow meter. This method is generally used when the customer order consists of a single product. The product amount is entered into a batch controller which will dispense the product by means of a pump, manifold, and a network of plumbing. The equipment serves as an accurate means to load a transport vehicle.

DRY FERTILIZER- STORED IN A WAREHOUSE

The dry fertilizer is stored in large piles inside of a building and is segregated by means of walls and or blocks. The products to be dispensed are determined by staff and described on a blend ticket based on the need of the customer's plant and soil; if the customer requires a single product, the same process is utilized. The equipment used to dispense the product into a truck consists of five large hoppers that are commonly connected by means of an under-bin auger and a belt conveyor. The hoppers are filled by a front-end loader that scoops each product from its stored state and loads it into the predetermined hopper. Once all of the bins are filled, the ticket information is entered into a computer module that variably introduces each product into the under-bin auger simultaneously. As the product(s) are mechanically moved through the under-bin auger, it transfers onto a belt conveyor and dispenses the material into the truck; a liquid pump system is installed at the transition of the auger and the belt conveyor to allow the introduction of water or micronutrients for dust suppressant and additional nutrients. The equipment serves as an accurate means to load a transport vehicle but does not serve as the point of sale. All of this activity is conducted in an enclosed building with a cement floor.

Unloading Liquid Dormant Oil into Tanks

The bulk liquid dormant oil (Omni Oil) will be received via truck. The unloading procedure will mimic the above mentioned liquid fertilizer operation.

Loading of Omni Oil into Transport Vehicle

All of the bulk Omni Oil is delivered to the customer by means of a tote or 1,500-gallon trailer. The vessels are filled (repackaged) by means of a designated dispensing system from a bulk storage tank. The loading operations will take place in the building labeled Bulk Omni Oil on the site map.

Products Delivered to and from Proposed Packaged Warehouse

All of the products received and unloaded into the Packaged Warehouse come in packages ranging by the ounce and as large as 275-gallon totes. These products are delivered to the facility in the packages used by the manufacture and then shipped to customers in the same package (i.e., products are not repackaged). The products are brought in via common carrier (i.e. Fed Ex, UPS, etc.) and will be unloaded at the proposed dock. Most products are

palletized and will remain on the pallet until purchased by the customer. When the products are purchased, staff will organize the order onto pallets that are staged for scheduled delivery. The scheduled delivery is typically loaded onto a delivery truck and shipped to the customer's farm, but customers on occasion will come to the facility to pick up their own order.

ESTIMATED TRUCK TRIPS

Helena currently generates approximately 68 trips for the sales, office, and fertilizer staff at its three (3) Hanford-area sites. The trucks delivering to the facility and to customers are approximated at 50 trips per day. The truck traffic will consist of California legal trucks (80,000 GVWR) and two-ton trucks with trailers (32,000 GVWR). It is anticipated at full build out, delivery truck trips will increase by 14–20 per day. Volumes listed are peak volumes estimated for the months of May–July.

OPERATIONAL HOURS

Monday–Friday 6:30 a.m.–5:00 p.m. Saturday 6:30 a.m.–12:00 p.m.

The project will employ approximately 22 employees throughout the year.

Mailing Address of Contact Person

Gareth Davis
WBU Project Manager
Helena Agri-Enterprises, LLC
(559) 285-3473
DavisG@helenaagri.com

Findings

As Lead Agency, the City finds that the project will not have a significant effect on the environment. The Initial Study (IS) (see *Section 3 - Environmental Checklist*) identified one or more potentially significant effects on the environment, but revisions to the project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures would be implemented that reduce all potentially significant impacts to less-than-significant levels. The City further finds that there is no substantial evidence that this project would have a significant effect on the environment.

Mitigation Measures Included in the Project to Avoid Potentially Significant Effects

MM BIO-1: Prior to ground disturbing activities, a qualified wildlife biologist, knowledgeable in the species discussed above and approved by CDFW, shall conduct a biological pre-construction clearance survey between 14 and 30 days prior to the onset of construction.

The clearance survey shall include walking transects to identify presence of San Joaquin kit fox, Swainson's hawk, burrowing owl, northern harrier, and any other special-status species and their sign. The pre-construction survey shall be walked by no greater than 50-foot transects for 100 percent coverage of the project and a 500-foot buffer, where feasible. If no evidence of special-status species is detected, MM BIO-2 and BIO-4 may not apply.

MM BIO-2: If dens capable of supporting San Joaquin kit fox are identified while conducting MM BIO-1, the avoidance buffers outlined below shall be established. No work can occur within these buffers unless the biologist approves and monitors the activity.

- Potential or Atypical den – 50 feet
- Known den – 100 feet
- Natal or pupping den – 500 feet, unless otherwise specified by CDFW

MM BIO-3: The following avoidance and minimization measures shall be implemented during all phases of the project to reduce the potential for impact from the project. They are modified from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered SJKF Prior to or During Ground Disturbance* (USFWS 2011, Appendix F).

a. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction or project site.
b. Construction-related vehicle traffic shall be restricted to established roads and predetermined ingress and egress corridors, staging, and parking areas. Vehicle speeds shall not exceed 20 miles per hour (mph) within the project site.
c. To prevent inadvertent entrapment of kit fox or other animals during construction, the contractor shall cover all excavated, steep-walled holes or trenches more than two feet deep at the close of each workday with plywood or similar materials. If holes or trenches cannot be covered, one or more escape ramps constructed of earthen fill or wooden planks shall be installed in the trench. Before such holes or trenches are filled, the contractor shall thoroughly inspect them for entrapped animals. All construction-related pipes, culverts, or similar structures with a diameter of four inches or greater that are stored on the project site shall be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If at any time an entrapped or injured kit fox is discovered, work in the immediate area shall be temporarily halted and the approved biologist shall be consulted.
d. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS and CDFW have been consulted. If necessary, and under the direct supervision of the

biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

e. No pets, such as dogs or cats, shall be permitted on the project sites to prevent harassment, mortality of kit foxes, or destruction of dens.
f. Use of anti-coagulant rodenticides and herbicides in project sites shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS and CDFW. If rodent control must be conducted, zinc phosphide shall be used because of the proven lower risk to kit foxes.
g. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the CDFW and USFWS.
h. The Sacramento Fish and Wildlife Office of USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a SJKF during project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at (559) 243-4014 and R4CESA@wildlifeca.gov.
i. All sightings of the SJKF shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to the Service at the address below.
j. Any project-related information required by the USFWS or questions concerning the above conditions, or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone: (916) 414-6620 or (916) 414-6600.
k. New sightings of SJKF shall be reported to the CNDDB.

MM BIO-4: If any burrowing owl burrows are observed during the pre-construction survey conducted during MM BIO-1, avoidance measures shall be consistent with those included in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). If occupied burrowing owl burrows are observed outside of the breeding season (September 1 through January 31) and within 250 feet of proposed construction activities, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (CDFG, 2012). During the breeding season (February 1 through August 31), a 500-foot (minimum) buffer zone shall be maintained unless a qualified biologist verifies through noninvasive methods that

either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

In addition, impacts to occupied burrowing owl burrows shall be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: (1) the birds have not begun egg laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

MM BIO-5: If all project activities are completed outside of the Swainson's hawk nesting season (February 15 through August 31), this mitigation measure may not apply.

Nesting surveys for Swainson's hawk shall be conducted in accordance with the protocol outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFG, 2000). If potential Swainson's hawk nests or nesting substrates are located within 0.5 miles of the project site, then those nests or substrates must be monitored for activity on a routine and repeating basis throughout the breeding season, or until Swainson's hawks or other raptor species are verified to be using them. The protocol recommends that the following visits be made to each nest or nesting site: one visit during January 1–March 20 to identify potential nest sites, three visits during March 20–April 5, three visits during April 5–April 20, and three visits during June 10–July 30. A fewer number of visits may be permissible if deemed adequate by the City after consultation with a qualified biologist. To meet the minimum level of protection for the species, surveys shall be completed for at least the two survey periods immediately prior to project-related ground disturbance activities. If Swainson's hawks are not found to nest within the survey area, then no further action is warranted.

MM BIO-6: If an active Swainson's hawk nest is discovered at any time within 0.5 miles of active construction, a qualified biologist shall complete an assessment of the potential for current construction activities to impact the nest. The assessment will consider the type of construction activities, the location of construction relative to the nest, the visibility of construction activities from the nest location, and other existing disturbances in the area that are not related to construction activities of this project. Based on this assessment, the biologist shall determine if construction activities can proceed and the level of nest monitoring required. Construction activities shall not occur within 500 feet of an active nest but depending upon conditions at the site this distance may be reduced. Fulltime monitoring by a qualified biologist to evaluate the effects of construction activities on nesting Swainson's hawks may be required. The qualified biologist shall have the authority to stop work if it is

determined that project construction is disturbing the nest. These buffers may need to increase depending on the sensitivity of the nest location, the sensitivity of the nesting Swainson's hawk to disturbances, and at the discretion of the qualified biologist.

MM BIO-7: If construction is planned outside the nesting period for raptors (other than Swainson's hawk and burrowing owl) and migratory birds (February 15 to August 31), this mitigation measure may not apply.

If construction is planned during the nesting season for migratory birds and raptors, a pre-construction survey to identify active bird nests shall be conducted by a qualified biologist to evaluate the site and a 250-foot buffer for migratory birds and a 500-foot buffer for raptors. If nesting birds are identified during the survey, active raptor nests shall be avoided by 500 feet and all other migratory bird nests shall be avoided by 250 feet. Avoidance buffers may be reduced if a qualified onsite monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affecting the breeding behaviors of the resident birds. Because nesting birds can establish new nests or produce a second or even third clutch at any time during the nesting season, nesting bird surveys shall be repeated every 30 days as construction activities are occurring throughout the nesting season.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (left the nest) and have attained sufficient flight skills to avoid project construction areas. Once the migratory birds or raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and may be removed, and monitoring may cease.

MM BIO-8: Prior to ground disturbance activities, or within one week of being deployed at the project site for newly hired workers, all construction workers at the project site shall attend a Construction Worker Environmental Awareness Training and Education Program, developed and presented by a qualified biologist.

The Construction Worker Environmental Awareness Training and Education Program shall be presented by the biologist and shall include information on the life history wildlife and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures the project operator is implementing to protect the species, reporting requirements, specific measures that each worker must employ to avoid take of the species, and penalties for violation of the Act. Identification and information regarding special-status or other sensitive species with the potential to occur on the project site shall also be provided to construction personnel. The program shall include:

- An acknowledgement form signed by each worker indicating that environmental training has been completed.

A copy of the training transcript and/or training video/CD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms shall be maintain onsite for the duration of construction activities.

MM CUL-1: Prior to any ground disturbance, a surface inspection of the site shall be conducted by a Tribal Monitor. The Tribal Cultural Staff shall monitor the site during grading activities. The Tribal Cultural Staff shall provide preconstruction briefings to supervisory personnel and any excavation contractor, which will include information on potential cultural material finds, and on the procedures, to be enacted if resources are found. Prior to any ground disturbance, the applicant shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during initial ground-disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the tribe.

MM CUL-2: If historical or archaeological cultural resources are discovered during construction or operations, activities shall stop within 100 feet of the find, and a qualified archeologist shall determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist.

The Lead Agency along with other relevant or tribal officials, shall be contacted upon the discovery of cultural resources to begin coordination on the disposition of the find(s). Treatment of any significant cultural resources shall be undertaken with the approval of the Lead Agency.

MM CUL-3: Upon coordination with the Lead Agency, any archaeological artifacts recovered shall be donated to an appropriate tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

MM CUL-4: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County Coroner.

MM GEO-1: Prior to issuing of grading or building permits, the project applicant shall submit to the City: (1) the approved Stormwater Pollution Prevention Plan (SWPPP) and (2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. Recommended Best Management Practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials;
- Managing waste, aggressively controlling litter, and implementing sediment controls; and
- Evidence of the approved SWPPP shall be submitted to the Lead Agency.

MM GEO-2: If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

MM HAZ-1: Prior to the issuance of building permits, the project proponent shall prepare a Hazardous Materials Business Plan (HMBP) and submit it to the State CERS for approval and Kings County Public Health Services Department/Environmental Health Services Division/Hazardous Materials Section for review.

a. The Hazardous Materials Business Plan shall:
   - Delineate hazardous material and hazardous waste storage areas;
   - Describe proper handling, storage, transport, and disposal techniques, including which routes will be used to transport hazardous materials;

- Describe methods to be used to avoid spills and minimize impacts in the event of a spill;
- Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction;
- Establish public and agency notification procedures for spills and other emergencies including fires; and
- Include procedures to avoid or minimize dust from existing residual pesticide and herbicide use that may be present on the site.

b. The project proponent/operator shall provide the Hazardous Materials Business Plan Chemical Handling Plan and Emergency Response Plan to all contractors working on the project and shall ensure that one copy is available at the project site at all times.

c. A copy of the approved HMBP, Chemical Handling Plan and Emergency Response Plan shall be submitted to the City of Lemoore Planning and Community Development Department.

SECTION 1 - INTRODUCTION

1.1 - Overview

Helena Agri-Enterprises, LLC proposes to construct a new facility on property within the Light Industrial zone district. The proposed use includes the storage, blending, and sale of bulk and prepackaged dry and liquid fertilizer, along with the storage of agricultural protection products.

1.2 - CEQA Requirements

The City of Lemoore is the Lead Agency for this project pursuant to the CEQA Guidelines (Public Resources Code Section 15000 et seq.). The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 – Initial Study*) provides analysis that examines the potential environmental effects of the construction and operation of the project. Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an IS to determine whether a discretionary project will have a significant effect on the environment. A Mitigated Negative Declaration (MND) is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur because revisions to the project have been made or mitigation measures will be implemented that reduce all potentially significant impacts to less-than-significant levels.

Based on the IS, the Lead Agency has determined that the environmental review for the proposed application can be completed with an MND.

1.3 - Impact Terminology

The following terminology is used to describe the level of significance of project environmental impacts.

- A finding of "no impact" is appropriate if the analysis concludes that the project would not affect a topic area in any way.
- An impact is considered "less than significant" if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered "less than significant with mitigation incorporated" if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the proponent.
- An impact is considered "potentially significant" if the analysis concludes that it could have a substantial adverse effect on the environment.

1.4 - Document Organization and Contents

The content and format of this IS/MND is designed to meet the requirements of CEQA. The report contains the following sections:

- *Section 1 – Introduction:* This section provides an overview of CEQA requirements, intended uses of the IS/MND, document organization, and a list of regulations that have been incorporated by reference.
- *Section 2– Project Description:* This section describes the project and provides data on the site's location.
- *Section 3 – Environmental Checklist:* This section contains the evaluation of 21 different environmental resource factors contained in Appendix G of the CEQA Guidelines. Each environmental resource factor is analyzed to determine whether the proposed project would have an impact. One of four findings is made which include: no impact, less-than-significant impact, less than significant with mitigation, or significant and unavoidable. If the evaluation results in a finding of significant and unavoidable for any of the 21 environmental resource factors, then an Environmental Impact Report will be required.
- *Section 4 – References:* This section contains a full list of references that were used in the preparation of this IS/MND.

1.5 - Incorporated by Reference

The following documents and/or regulations are incorporated into this IS/MND by reference:

- City of Lemoore General Plan
- City of Lemoore Zoning Ordinance
- City of Lemoore Municipal Code
- City of Lemoore 2015 Urban Water Management Plan
- City of Lemoore Master Storm Drain Plan
- 2015 Kings County Emergency Operations Plan

SECTION 2 - PROJECT DESCRIPTION

2.1 - Introduction

Helena Agri-Enterprises, LLC is proposing to construct a new facility at APN 023-520-008 and 023-510-044. The use of the property will be consistent with the current Light Industrial zoning. The proposed use includes the storage, blending, and sale of bulk and prepackaged dry and liquid fertilizer, along with the storage of agricultural protection products.

2.2 - Project Location

The proposed site is in Section 5, Township 19 South, Range 20 East, Mount Diablo Base and Meridian, within the incorporated City of Lemoore, County of Kings, California. The project site is located south of Industry Way, east of Production Place, west of Belle Haven Drive, and west of State Route (SR) 41. The site includes Assessor's Parcel Numbers 023-520-008 and 023-510-044, which totals approximately 31 acres. The regional location is depicted on Figure 2-1 and the project site location is depicted on Figure 2-2.

2.3 - Surrounding Land Uses

Active agricultural cultivation is present to the north and west of the proposed project site. There is undeveloped property and a large-scale industrial facility to the east. The San Joaquin Valley Railroad operates to the south. The property south of the railroad is planned for residential housing.

2.4 - Proposed Project

Helena Agri-Enterprises, LLC proposes the construction of a new facility on approximately 31 acres. The proposed use includes the storage, blending, and sale of bulk and prepackaged dry and liquid fertilizer along with the storage of agricultural protection products. This proposal will allow Helena to consolidate three existing operations in the Hanford area to a single site that is intended to increase operational efficiencies and better serve their customers (project). The proposed project requires the approval of a Major Site Plan Review.

The project is proposed to be constructed in two phases.

Phase 1 will include the following:

- A truck/tank rinse pad with an area of 2,700 square feet (sf; location to be determined),
- A 10 sf x 70 sf truck scale,
- A 4,200 sf office,
- A 6,300 sf shop,
- A 40,500 sf warehouse,

- A 9,400 area for tank containment with four 500,000-gallon self-contained tanks (approximately 670,000 gallons of liquid fertilizer),
- A 36,600-square-foot bulk dry fertilizer warehouse (approximately 16,665 tons), and
- Construction of approximately 3,800 feet of railroad tracks.

Phase 2, constructed when market justifies the expansion, will include:

- A 2,400 sf office,
- A 5,500 sf tank farm (approximately 450,000 gallons),
- A 13,600 sf bulk dry fertilizer warehouse (6,000 tons),
- A 30,000 sf warehouse,
- Two 500,000-gallon self-contained storage tanks, and
- 790 feet of railroad tracks.

Operations

Helena's operations will include the storage and blending of liquid and dry fertilizer. The liquid and dry fertilizer is transported to the site via trucks or by rail. When liquid fertilizer is delivered to the site, it is offloaded from the tanker truck on a contained load pad and dispensed into the appropriate above ground storage tank by means of hoses, pumps, and a network of plumbing. The connection points, from the transport vehicle to the pump, utilize drip pans to capture any residual material that may develop after disconnecting the hoses. This will eliminate the need to wash the concrete load pads. If and when water accumulates at a load pad, the water will be captured and transferred to a vessel. The vessel will be furnished to a customer who will apply the product per the label.

When dry fertilizer is delivered to the facility by truck, it is offloaded into a conveyor. The conveyor moves the product from ground level to the top of the warehouse and is distributed to the appropriate interior area. All of the dry fertilizer is transferred in enclosed equipment and inside of a building except for the initial two-foot drop point from the belly of the trailer to the conveyor. The two-foot drop point will utilize a choke feed method to reduce dust and spillage. Any material that accumulates on the concrete aprons will be swept and placed in the product pile at the end of the unloading process. If the fertilizer is delivered by rail, the same process occurs as described above for both liquid and dry fertilizer products.

DRY AND LIQUID FERTILIZER

All of the liquid and dry fertilizer are delivered to the customer by means of a full-size truck (80,000 GVWR) or a two-ton truck with a trailer (32,000 GVWR). The operations for loading vessels of sold products to Helena's customers are as follows:

Liquid Fertilizer – Stored in Tanks

The liquid fertilizer can be loaded by two different methods. The first and most common way to load a truck is through a liquid blender which is equipped with load cells to weigh each product. Helena staff will issue a blend ticket for the customer's specific nutrient needs that

consists of two or more previously prepared products. The ticket information is inputted into an automated screen that will dispense, blend and loadout the product by means of pumps, a manifold, and a network of plumbing. The manifold is connected to all of the tanks but through valves on the manifold remain separate.

The second means to load a vessel is through a flow meter. This method is generally used when the customer order consists of a single product. The product amount is entered into a batch controller which will dispense the product by means of a pump, manifold, and a network of plumbing. The equipment serves as an accurate means to load a transport vehicle but does not serve as the point of sale.

Dry Fertilizer- Stored in a Warehouse

The dry fertilizer is stored in large piles inside of a building and is segregated by means of walls and or blocks. The products to be dispensed are determined by staff and described on a blend ticket based on the need of the customer's plant and soil; if the customer requires a single product, the same process is utilized. The equipment used to dispense the product into a truck consists of five large hoppers that are commonly connected by means of an under-bin auger and a belt conveyor. The hoppers are filled by a front-end loader that scoops each product from its stored state and loads it into the predetermined hopper. Once all of the bins are filled, the ticket information is entered into a computer module that variably introduces each product into the under-bin auger simultaneously. As the product(s) are mechanically moved through the under-bin auger, it transfers onto a belt conveyor and dispenses the material into the truck; a liquid pump system is installed at the transition of the auger and the belt conveyor to allow the introduction of water or micronutrients for dust suppressant and additional nutrients. The equipment serves as an accurate means to load a transport vehicle but does not serve as the point of sale. All of this activity is conducted in an enclosed building with a cement floor.

Unloading Liquid Dormant Oil into Tanks

The bulk liquid dormant oil (Omni Oil) will be received via truck. The unloading procedure will mimic the above mentioned liquid fertilizer operation.

Loading of Omni Oil into Transport Vehicle

All of the bulk Omni Oil is delivered to the customer by means of a tote or 1,500-gallon trailer. The vessels are filled (repackaged) by means of a designated dispensing system from a bulk storage tank. The loading operations will take place in the building labeled Bulk Omni Oil on the site map.

Products Delivered to and from Proposed Packaged Warehouse

All of the products received and unloaded into the Packaged Warehouse come in packages ranging by the ounce and as large as 275-gallon totes. These products are delivered to the facility in the packages used by the manufacture and then shipped to customers in the same package (i.e., products are not repackaged). The products are brought in via common carrier

(i.e. Fed Ex, UPS, etc.) and will be unloaded at the proposed dock. Most products are palletized and will remain on the pallet until purchased by the customer. When the products are purchased, staff will organize the order onto pallets that are staged for scheduled delivery. The scheduled delivery is typically loaded onto a delivery truck and shipped to the customer's farm, but customers on occasion will come to the facility to pick up their own order.

ESTIMATED TRUCK TRIPS

Helena currently generates approximately 68 trips for the sales, office, and fertilizer staff at its three (3) locations in the Hanford area. The trucks delivering to the facility and to customers are approximated at 50 trips per day. The truck traffic will consist of California legal trucks (80,000 GVWR) and two-ton trucks with trailers (32,000 GVWR). It is anticipated at full build out, delivery truck trips will increase by 14–20 per day. Volumes listed are peak volumes estimated for the months of May–July.

OPERATIONAL HOURS

Monday–Friday 6:30 a.m.–5:00 p.m. Saturday 6:30 a.m.–12:00 p.m.

The project will employ approximately 22 employees throughout the year.

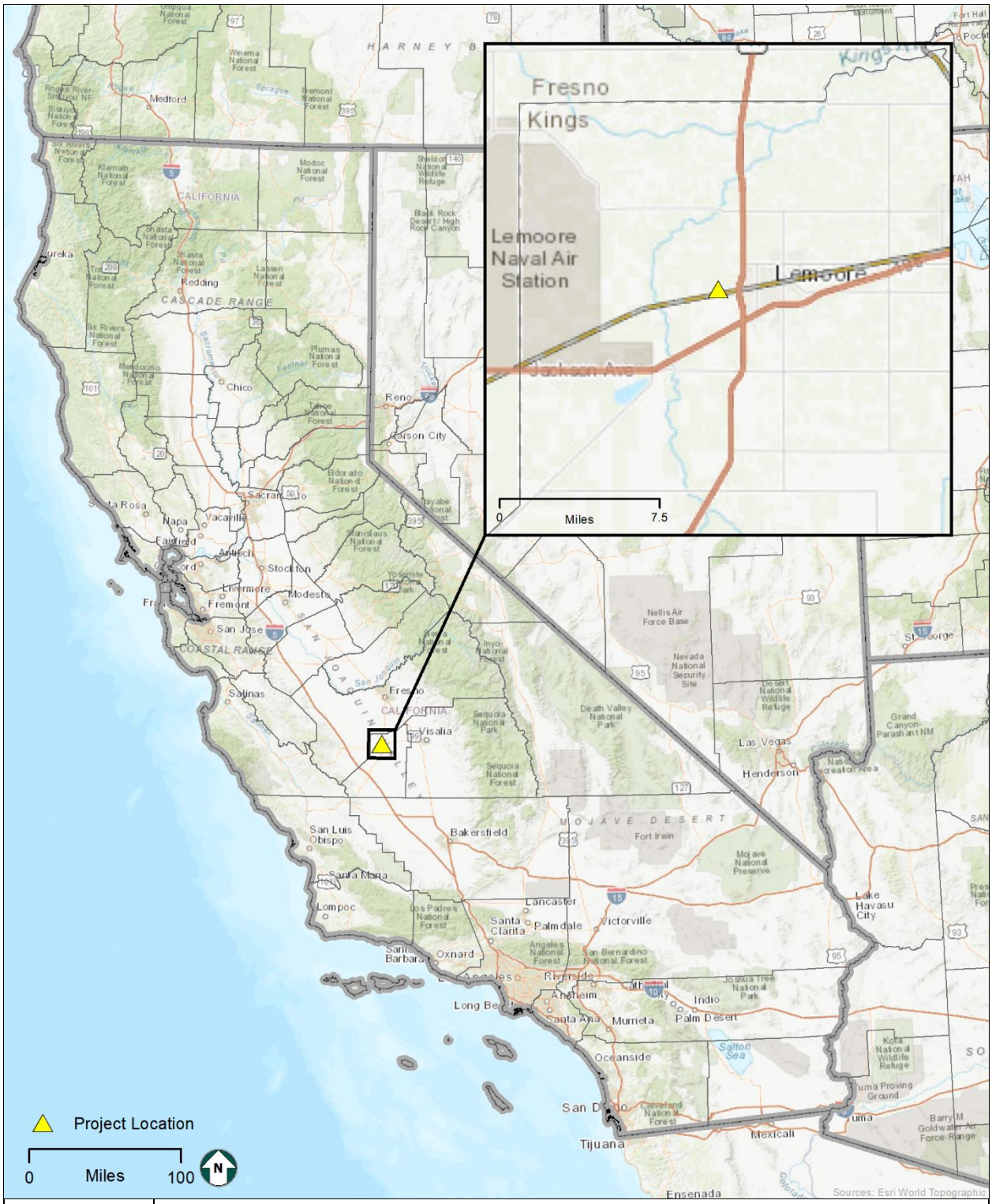

Figure 2-1
Regional Location

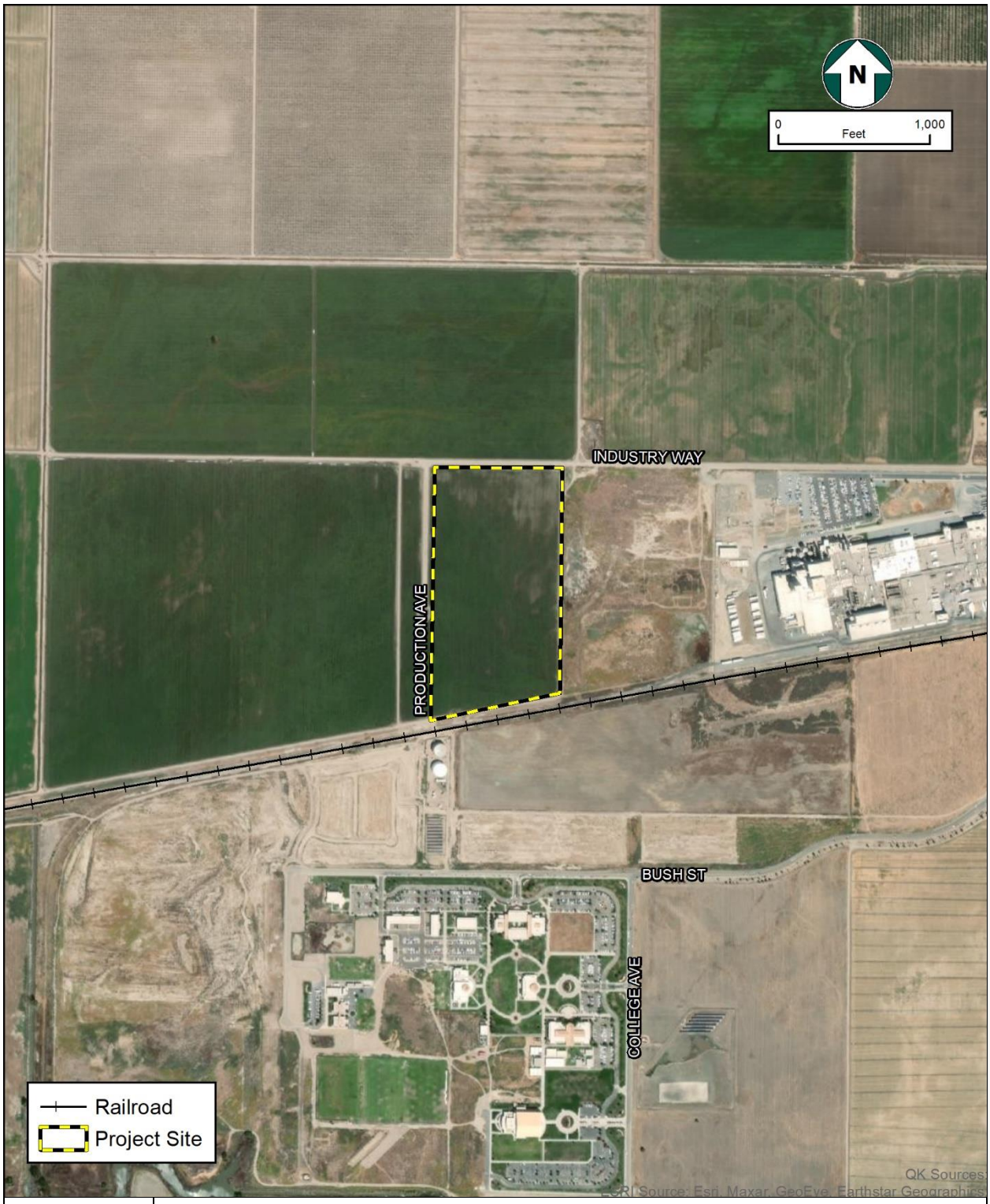

Figure 2-2
Project Site

SECTION 3 - EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 - Environmental Checklist and Discussion

1. **Project Title:**

   Helena Fertilizer Plant Project

2. **Lead Agency Name and Address:**

   City of Lemoore
   711 W. Cinnamon Drive
   Lemoore, CA 93245

3. **Contact Person and Phone Number:**

   Judy Holwell, Community Development Director
   (559) 924-6744 ext. 740

4. **Project Location:**

   The proposed site is in Section 5, Township 19 South, Range 20 East, Mount Diablo Base and Meridian, within the incorporated City of Lemoore, County of Kings, California. The project site is located south of Industry Way, east of Production Place, west of Belle Haven Drive and SR41. The project includes Assessor's Parcel Numbers 023-520-008 and 023-510-044, totaling approximately 31 acres.

5. **Project Sponsor's Name and Address:**

   Gareth Davis
   WBU Project Manager
   Helena Agri-Enterprises, LLC
   (559) 285-3473
   DavisG@helenaagri.com

6. **General Plan Designation:**

   Light Industrial

7. **Zoning:**

   ML (Light Industrial)

8. **Description of Project:**

   See *Section 2.4 – Proposed Project.*

9. Surrounding Land Uses and Setting:

See *Section 2.3 – Surrounding Land Uses*.

10. Other Public Agencies Whose Approval May be Required:

- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Regional Water Quality Control Board – Central Valley (RWQCB)
- State Water Resource Control Board (SWRCB)
- California Department of Fish and Wildlife
- Kings County Environmental Health
- California Environmental Protection Agency

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

On January 13, 2021, the City of Lemoore Community Development Department, acting as the CEQA Lead Agency, informed the Santa Rosa Rancheria Tachi Yokut Tribe (Tribe) in writing and by email of the project and its location. An email response was received the same date. The Tribe has concerns about this project's potential to adversely affect tribal resources and they would like to continue consultation on potential mitigation measures. Responses received will be incorporated as mitigation measures.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

3.2 - Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Findings of Significance

3.3 - Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENT IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable

standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Judy Holwell, Community Development Director

Date

3.4 - Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: "Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review;
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis; and
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a

previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.1 - AESTHETICS					
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c.	In nonurbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

Impact #3.4.1a – Would the project have a substantial adverse effect on a scenic vista?

As seen in Figure 2-2, the project site consists of heavily disturbed, undeveloped land that is surrounded by undeveloped agricultural land to the north and west, light industrial to the east, low density residential to the south.

The City of Lemoore 2030 General Plan Community Design Element requires that scenic vistas to the Coalinga Mountains, other natural features, and landmark buildings be maintained (City of Lemoore, 2008). There are no natural features or landmark buildings within the vicinity of the project site, nor would it impede views to the Coalinga Mountains. The project is not located in an area that would result in substantial adverse effects on any scenic vistas. The project would have no impact to a scenic vista.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.1b – Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

There are no listed State scenic highways within or near the City of Lemoore, nor are there scenic highways in Kings County (California Department of Transportation, 2020). The closest eligible scenic highway is SR 198, west of Interstate (I)-5, approximately 1.5 miles south of the project site. The project would have no impact to a State scenic highway.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.1c – In nonurbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The overall visual character of the site itself would change, as the currently undeveloped land would be improved with agricultural uses. However, the proposed project would be similar in visual appearance to the existing industrial uses to the east of the project site.

The project does not require a General Plan Amendment or Zone Change, as the project is consistent with the zoning and land use designations. Development of the project will be approved in compliance with the City's Municipal Code and development standards. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.1d – Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Construction of the proposed project would be temporary and generally occur during daytime hours, typically from 7:00 a.m. to 6:00 p.m. All outside lighting would be directed

downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties. Because lighting used to illuminate work areas would be shielded and focused downward, the potential for lighting to affect any adjacent properties adversely is minimal.

Increased truck traffic and the transport of construction materials to the project site would be minimal. Construction activity would focus on specific areas on the sites, and any sources of glare would not be stationary for a prolonged period. Therefore, construction of the proposed project would not create a new source of substantial glare that would affect daytime views in the area.

The proposed development would also comply with all lighting standards established in the City's 2030 General Plan Community Design Element, and Zoning Ordinance (Title 9, Chapter 5, Article B, Section 4). Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.2 - AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☒	☐
b.	Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

Impact #3.4.2a – 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 nonagricultural use?

According to the Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), the project site is classified as "Farmland of Statewide Importance" (CA Department

of Conservation, 2016). The proposed project will convert 31 acres of Farmland of Statewide Importance to a nonagricultural use. However, the project site is located within the City of Lemoore city limits and zoned for Light Industrial, so the conversion of land use was anticipated and previously evaluated by the Lemoore General Plan Environmental Impact Report (City of Lemoore, 2008). Considering these factors, the proposed project will have a less-than-significant impact on agricultural resources.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant***.

.

Impact #3.4.2b – Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

See discussion of Impact #3.4.2a, above.

According to the City's Zoning Ordinance, the project site has a Light Industrial land use designation and is currently zoned ML (Light Industrial). The project site is not subject to a Williamson Act contract and would not conflict with any current Williamson Act contracted land in the vicinity (see Figure 3.4.2-2). Therefore, the project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact.***

Impact #3.4.2c – 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))?

As noted above, the project site is zoned ML. The project site and the surrounding areas are not zoned for forest land or timberland (City of Lemoore, 2019). The site will be developed with an industrial use that is consistent with existing zoning. The project will have no impact on land designated for forest land or timberland use.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2d – Would the project result in the loss of forest land or conversion of forest land to non-forest use?

See discussion of Impact #3.4.2c, above.

The proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.2e – Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?

See discussion of Impact #3.4.2c, above.

The proposed project will have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

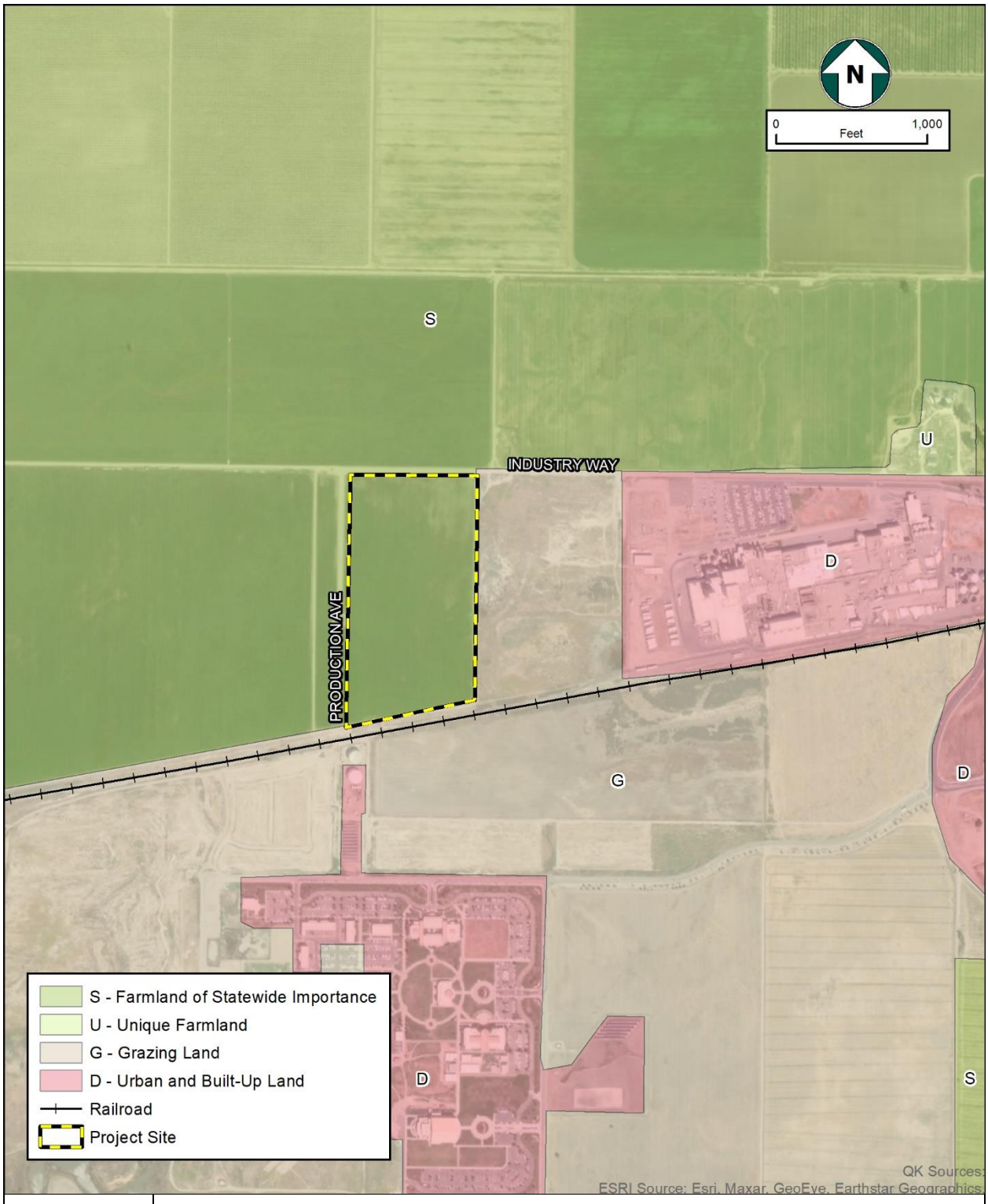

Figure 3.4.2-1
Farmland Monitoring and Mapping Program (FMMP)

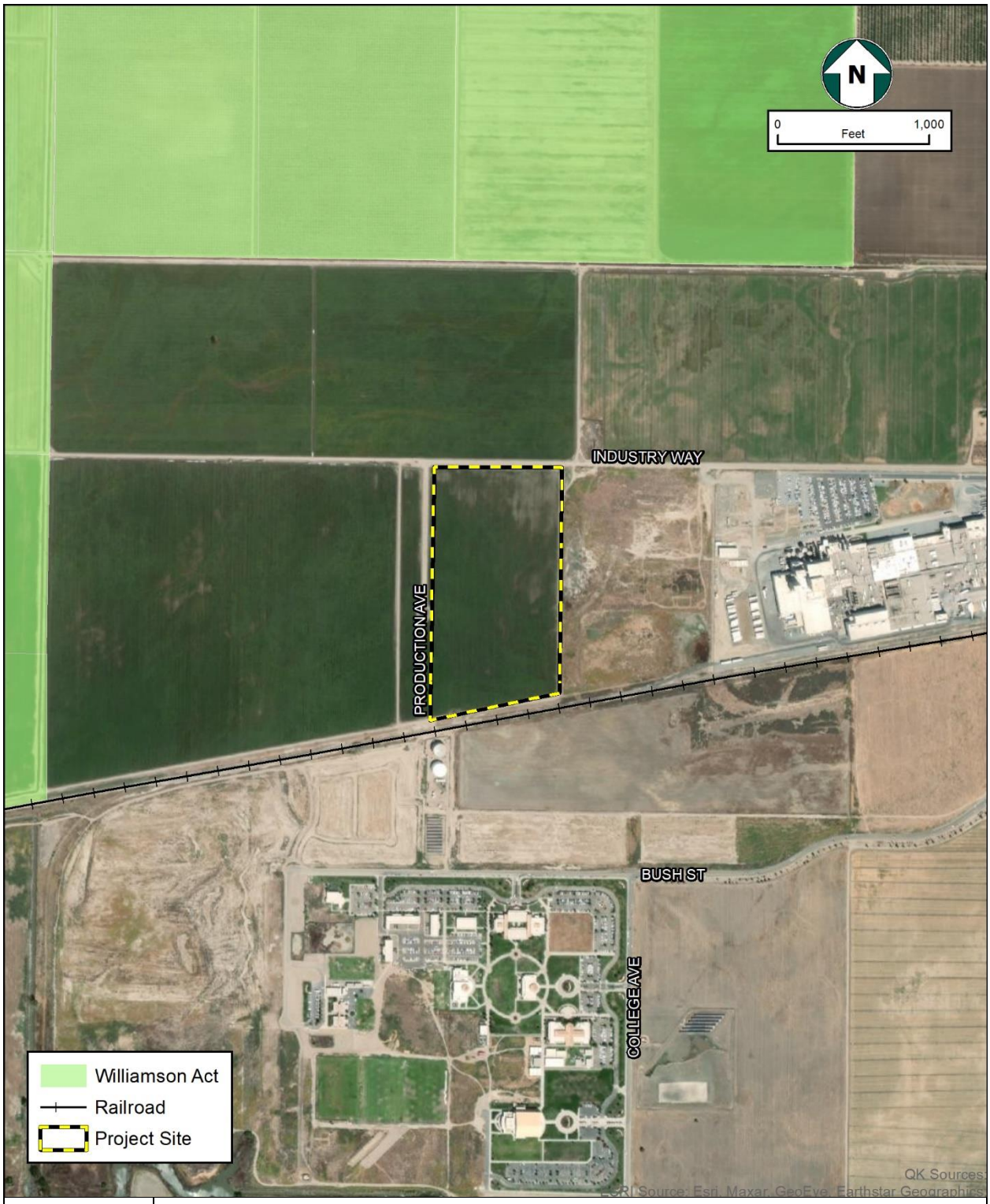

Figure 3.4.2-2
Williamson Act Contracted Land

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.3 - AIR QUALITY					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?	☐	☐	☒	☐
c.	Expose sensitive receptors to substantial pollutant concentration?	☐	☐	☒	☐
d.	Result in other emissions (such as those leading to odor) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion

The analysis of the project's air quality impacts can be found in the Air Quality, Greenhouse Gas, and Energy Impact Assessment prepared for the project, and is included as Appendix A (Stantec Consulting Services, 2021).

Impact #3.4.3a – Would the project conflict with or obstruct implementation of the applicable air quality plan?

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project conform to the assumptions in the AQPs?

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

Air Quality, Greenhouse Gas, and Energy Impact Assessment

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

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

The assumptions, inputs, and control measures are analyzed to determine if the SJVAB can reach attainment for the ambient air quality standards. To show attainment of the standards, the SJVAPCD analyzes the growth projections in the Valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The SJVAPCD then formulates a control strategy to reach attainment that includes both State and SJVAPCD regulations and other local programs and measures. The applicable AQPs include the 2016 8-Hour Ozone Plan which contains measures to achieve reductions in emissions of ozone precursors and sets plans towards attainment of ambient ozone standards by 2031 and the 2018, 2016, 2015, 2012, and 2008 $PM_{2.5}$ Plans to address multiple $PM_{2.5}$ air quality standards and attainment deadlines.

CONTRIBUTION TO AIR QUALITY VIOLATIONS

A measure of determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Because of the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}, if project generated emissions of either of the ozone precursor pollutants (ROG and NOx), PM_{10}, or $PM_{2.5}$ would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. As shown in Tables 3.4.3-1 and 3.4.3-2, below, emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ from construction and operation of the project would not exceed the SJVAPCD's significance thresholds (Stantec Consulting Services, 2021).

Table 3.4.3-1
Localized Pollutant Concentrations for Construction - Unmitigated

Project Component Year	Emissions (Pounds per day)				
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1 (2022)	1.67	16.67	16.89	4.24	2.20
Phase 1 (2023)	1.20	11.60	14.40	1.20	0.40
Phase 2 (2025)	1.06	10	14.17	1.82	0.98
Phase 2 (2026)	1.33	11.33	16.67	0.67	0.53
Significance Thresholds	100	100	100	100	100
Any Year Exceed Significance Thresholds?	No	No	No	No	No

(Stantec Consulting Services, 2021)

Table 3.4.3-2
Localized Pollutant Concentrations for Operation - Unmitigated

Component	Source	Emissions (Pounds/day)				
		ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1	2023 Total	3.51	18.52	6.63	2.47	0.93
	2026 Total	5.26	29.04	8.93	3.67	1.37
Significance Thresholds		100	100	100	100	100
Exceed Significance Thresholds?		No	No	No	No	No

(Stantec Consulting Services, 2021)

CONSISTENCY WITH ASSUMPTIONS IN AQPS

The primary way of determining consistency with the AQPs' assumptions is determining consistency with the applicable General Plan to ensure that the project's population density and land use are consistent with the growth assumptions used in the AQPs for the SJVAB.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth and designates locations for land uses to regulate growth. The Kings County Association of Governments (KCAG) uses the growth projections and land use information in adopted general plans, among other sources, to estimate future average daily trips and then vehicle miles traveled (VMT), which are then provided to the SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQPs are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards based on these growth and emission estimates.

The City General Plan was adopted in 2008 prior to the SJVAPCD's adoption of the applicable AQPs. The project is consistent with the General Plan land use designation of Light Industrial and was an anticipated land use that would not contribute to unplanned growth; therefore, it would be consistent with the modeling used to prepare the AQPs. The impact would be less than significant.

CONTROL MEASURES

The AQP contains several control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this project are provided in the Regulatory Setting. The project would comply with all applicable SJVAPCD rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

CONCLUSION

The project would not conflict with or obstruct implementation of the applicable AQPs.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.3b – Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

To result in a less-than-significant impact, the following criteria must be true:

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

Step 1: Regional Analysis

Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to SJVAPCD thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from project construction and operation are also assessed using concentration-based thresholds that determine if the project would result in a

localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance.

The primary pollutants of concern during project construction and operation are ROG, NOx, PM_{10}, and $PM_{2.5}$. The SJVAPCD GAMAQI, adopted in 2015, contains thresholds for ROG and NOx; SOx, CO, PM_{10}, and $PM_{2.5}$. Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NOx emissions in the presence of sunlight. Therefore, ROG and NOx are termed ozone precursors. The SJVAB often exceeds the State and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants. The SJVAPCD's annual emission significance thresholds used for defining the project's contribution for both operational and construction emissions are provided in 3.4.3-3, below.

Table 3.4.3-3
SJVAPCD Significance Thresholds

Pollutant	Significance Threshold	
	Construction Emissions (tons/year)	Operational Emission (tons/year)
CO	100	100
NOx	10	10
ROGs	10	10
SOx	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15

Source: (SJVAPCD, 2017)

CONSTRUCTION EMISSIONS

Construction emissions associated with the project are shown in Table 3.4.3-1, above. For assumptions in estimating the emissions, please refer to Modeling Parameters and Assumptions. As shown in Table 3.4.3-3, the emissions are below the significance thresholds and, therefore, are less than significant on a project basis.

OPERATIONS

Operational emissions occur over the lifetime of the project and are from two main sources: area sources and motor vehicles, or mobile sources. Operational emissions are shown in Table 3.4.3-4, below. The SJVAPCD considers construction and operational emissions separately when making significance determinations; however, it is important to note that the operational emissions in 2023 and in 2026 combined with the construction emissions would not exceed the SJVAPCD thresholds of significance.

For assumptions in estimating the emissions, please refer to Section 4, Modeling Parameters and Assumptions of Appendix A. The SJVAPCD also considers stationary sources separate from

nonstationary sources, however, as shown below, the combined emissions would not exceed the SJVAPCD thresholds of significance as shown in Table 3.4.3-3. Table 3.4.3-4 and Table 3.4.3-5 illustrates the project's construction and operational emissions for all criteria air pollutants.

Table 3.4.3-4
Construction Emissions - Unmitigated

Component Year	Emissions (tons/year)				
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1 (2022)	0.22	2.20	2.23	0.56	0.29
Phase 2 (2023)	0.03	0.29	0.36	0.03	0.01
Phase 2(2025)	0.14	1.32	1.87	0.24	0.13
Phase 2 (2026)	0.02	0.17	0.25	0.01	0.008
Significance Thresholds	10	10	100	15	15
Any Year Exceed Significance Threshold?	No	No	No	No	No

Table 3.4.3-5
Operational Emissions - Unmitigated

Component	Source	Emissions (tons/year)				
		ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1	Area	0.46	<0.0001	<0.0001	0.00	0.00
	Energy	0.01	0.10	0.09	0.008	0.008
	Mobile	0.08	2.06	0.67	0.39	0.11
	Off-road	0.02	0.21	0.25	0.01	0.01
	Stationary	0.005	0.01	0.09	0.007	0.007
	Rail	0.06	1.00	0.11	0.03	0.03
	2023 Total	0.64	3.38	1.21	0.45	0.17
Buildout	Area	0.67	<0.0001	0.001	0	0
	Energy	0.02	0.15	0.13	0.01	0.01
	Mobile	0.12	2.95	0.94	0.58	0.16
	Off-road	0.02	0.19	0.25	0.009	0.009
	Stationary	0.005	0.01	0.09	0.007	0.007
	Rail	0.12	2	0.22	0.06	0.06
	2026 Total	0.96	5.30	1.63	0.67	0.25
Significance Thresholds		10	10	100	15	15
Exceed Significance Thresholds?		No	No	No	No	No

Notes:
All emissions except Rail were quantified using CalEEMod, version 2016.3.2 based on project details and estimated operating year for the proposed project.
Rail emissions were estimated based on one locomotive per week, current unload time is 10 minutes, the analysis used 30 minutes to provide a worst-case scenario.
Operational emissions are not anticipated to increase substantially after completion of Phase 2, but to provide a conservative estimate, mobile trips were increased by 50 percent, rail emissions were doubled to evaluate a worst-case of two locomotives per week. Area and Energy emissions at buildout were based on the total square footage.
Off-road and Stationary equipment were not anticipated to increase.
Totals may not sum due to rounding.
Source:(Stantec Consulting Services, 2021).

The criteria pollutant emissions analysis, as shown above, assessed whether the project would exceed the SJVAPCD's thresholds of significance. As shown in Table 3.4.3-4 and Table 3.4.3-5, criteria pollutant emissions would not exceed any threshold of significance during project construction or operation. Therefore, the combination of unmitigated project emissions with the criteria pollutants from other sources within the SJVAB would not cumulatively contribute to a significant impact according to this criterion.

It should be noted that the emissions estimate is presenting the project operational emissions as "new" emissions, however, there are existing emissions associated with ongoing operations for the existing facilities, which will be consolidated to the Lemoore location. The emissions presented are conservative.

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that, if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The SJVAB is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NOx or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone.

Step 2: Plan Approach

Section 15130(b) of the CEQA Guidelines states the following:

The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. The SJVAB is in nonattainment for ozone and particulate matter (PM_{10} and $PM_{2.5}$), which means that concentrations of these pollutants currently exceed the applicable ambient air quality standards.

Cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The geographic scope for cumulative criteria pollution from air quality impacts is the SJVAB because that is the area in which the air pollutants generated by the sources within the SJVAB circulate and are often trapped. The SJVAPCD is required to prepare and maintain air quality attainment plans and a State Implementation Plan to document the strategies and

measures to be undertaken to reach attainment of ambient air quality standards. While the SJVAPCD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning would help the SJVAB achieve clean air mandates. The SJVAPCD evaluated emissions from land uses and transportation in the entire SJVAB when it developed its attainment plans.

In accordance with CEQA Guidelines Section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously approved plan or mitigation program.

As discussed in Impact #3.4.3a, the project is consistent with all applicable control measures in the air quality attainment plans. The project would be required to comply with any SJVAPCD rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with control measures and regulations.

Step 3: Cumulative Health Impacts

The SJVAB is in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects.

The regional analysis of construction and operational emissions, as shown above, indicates that the project would not exceed the SJVAPCD's significance thresholds and the project is consistent with the applicable AQPs. Therefore, the project would not result in significant cumulative health impacts from nonattainment pollutants and impacts would be less than significant.

CONCLUSION

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

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.3c – Would the project expose sensitive receptors to substantial pollutant concentrations?

This discussion addresses whether the proposed project would expose sensitive receptors to Naturally Occurring Asbestos (NOA), construction-generated fugitive dust (PM_{10}), ROG, NOx, $PM_{2.5}$, Valley fever, and construction generated DPM. A sensitive receptor is a person in a population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses (sensitive sites) where sensitive receptors are typically located:

- Long-term health care facilities,
- Rehabilitation centers,
- Convalescent centers,
- Hospitals,
- Retirement homes,
- Residences, and
- Schools, playgrounds and childcare centers.

The proposed project is not considered a sensitive receptor. The nearest existing sensitive receptor is West Hills College campus located approximately 912 feet south of the project site; the nearest residential receptor is the single-family residence located 2,700 feet east of the project site.

Localized Impacts

Emissions occurring at or near the project have the potential to create a localized impact also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. The pollutants of concern for localized impact in the SJVAB are NO_2 and CO.

The SJVAPCD has provided guidance for screening localized impacts in the GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant, then ambient air quality modeling would be necessary. If the project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

CONSTRUCTION: LOCALIZED CONCENTRATIONS OF PM_{10}, $PM_{2.5}$, CO, AND NO_2

Local construction impacts would be short-term in nature lasting only during the duration of construction. Because of the short duration and limited amount of construction anticipated for the project, application of Best Management Practices through compliance with Regulation VIII Fugitive Dust Prohibitions to minimize construction emissions, and

levels of emissions less than the SJVAPCD's emission significance thresholds, localized construction concentrations are considered less than significant. It should also be noted that the onsite construction emissions would be less than 100 pounds per day for each of the criteria pollutants, as shown in Table 3.4.3-1. Based on the SJVAPCD's guidance, the construction emissions would not cause an ambient air quality standard violation. Impacts would be less than significant.

OPERATION: LOCALIZED CONCENTRATIONS OF PM10, PM2.5, CO, AND NO_2

Operational modeling of onsite emissions for the project indicate that the project would not exceed 100 pounds per day for each of the criteria pollutants, as shown in Table 3.4.3-2. Therefore, based on the SJVAPCD's guidance, the operational emissions would not cause an ambient air quality standard violation. Impacts would be less than significant.

Construction

ROG

During paving operations, ROG is emitted. The amount emitted is dependent on the amount of ROG (or VOC) in the paving materials. There are three types of asphalt that are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, SJVAPCD Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of three percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Sensitive receptors are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to sensitive receptors from ROG during construction is less than significant.

NATURALLY OCCURRING ASBESTOS

According to a map of areas where naturally occurring asbestos in California are likely to occur, there are no such areas in the project area (Stantec Consulting Services, 2021). Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos and impacts would be less than significant.

FUGITIVE DUST (PM_{10})

PM_{10} emissions would not exceed the thresholds of significance, nevertheless, the potential for localized PM_{10} health impacts are a concern; however, the project would comply with the SJVAPCD's Regulation VIII incorporating Best Management Practices for reducing fugitive dust. Therefore, potential impacts are reduced to a less-than-significant level.

VALLEY FEVER

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

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The project will minimize the generation of fugitive dust during construction activities by complying with the SJVAPCD's Regulation VIII. Therefore, this regulation would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the project from generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

DIESEL PARTICULATE MATTER

Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road, heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. However, construction is temporary and occurs over a relatively short duration. Operation of construction equipment is regulated by federal, State, and local regulations including CARB and SJVAPCD rules and regulations, and occurring intermittently throughout the course of a day. The likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. It is not anticipated that the proposed project would expose sensitive receptors to substantial pollutant concentrations and impacts would be considered less than significant.

Operations

ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across the roadways and in the air. The concentrations would not be great enough to result in direct health effects.

Toxic Air Contaminants

The CARB Air Quality and Land Use Handbook contains recommendations for distances between sensitive receptors and certain land uses. The proposed project is not identified as a land use of concern by CARB and is not located within the screening distances for sources of toxic air contaminants (Stantec Consulting Services, 2021). Based on the information presented, sensitive receptors would not be exposed to substantial pollutant concentrations and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.3d – Would the project result in emissions (such as those leading to odors) adversely affecting a substantial number of people?

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The occurrence and severity of odor impacts depends on numerous factors including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest sensitive receptor in the vicinity of the proposed project site would be the students and faculty at West Hills College, approximately 912 feet south of the project site. The nearest residential receptor would be the single-family residence located 2,700 feet east of the project site (Stantec Consulting Services, 2021).

Construction activities associated with the proposed project could result in short-term odorous emissions from diesel exhaust associated with construction equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. In addition, this diesel-powered equipment would only be present onsite temporarily during construction activities. Therefore, construction would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. Although the project would store organic liquids, the storage vessels and transfer of materials would be subject to SJVAPCD rules limiting fugitive releases. The proposed project does not contain land uses typically associated with emitting objectionable odors and is not located within the screening distances to sources of odors recommended by the SJVAPCD. Therefore, the impact would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.4 - BIOLOGICAL RESOURCES				
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or 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?	☐	☐	☐	☒

Discussion

The biological resources analysis below is based upon a review of available literature and databases and existing site conditions evaluated during a reconnaissance survey. These

studies evaluated the potential for sensitive biological resources to occur on and in the vicinity of the project and any impacts that could potentially occur.

Reviews of the California Department of Fish and Wildlife's California Natural Diversity Database (California Department of Fish and Wildlife, 2021), the California Native Plant Society's Rare Plant Program Inventory (California Native Plant Society, 2021), and the United States Fish and Wildlife Service's Information for Planning and Consultation online tool (US Fish and Wildlife Service, 2021) were conducted to identify special-status plant and wildlife species with the potential to occur within the project and in the vicinity of the project (the *Lemoore* 7.5" USGS quadrangle, within which the project is situated, and the surrounding eight quadrangles). Information regarding the presence of Critical Habitat in the project vicinity was obtained from the United States Fish and Wildlife Service's Critical Habitat Mapper database (USFWS, 2021b). The results of the database inquiries were reviewed to evaluate the potential for occurrence of special-status species and other sensitive biological resources known to occur on or near the project site prior to conducting the biological reconnaissance survey.

On February 9, 2021, QK biologist Shannon Gleason conducted a biological reconnaissance survey of the project site and a 250-feet buffer, accessible areas (Survey Area). Meandering pedestrian transects were walked through the Survey Area to achieve 100 percent visual coverage, with the aid of binoculars. The purpose of the survey was to determine the presence and extent of existing plant communities and any sensitive habitats, the presence and potential for occurrence of special-status plant and animal species, and to identify any other sensitive biological resources within the Survey Area. Protocol surveys for specific special-status plant or wildlife species were not conducted. Locations of sensitive biological resources were documented using the ArcGIS Collector application installed on an iPad. Photographs were taken to document the existing landscape and sensitive biological resources. Detailed notes on observed plant and wildlife species and site conditions were taken while conducting the survey.

General Site Conditions

The project site is bordered to the north by West Industry Way and to the south by the Union Pacific/San Joaquin Valley Railroad track. There are uncultivated agricultural fields immediately to the east and west. The Leprino Foods Company operates a facility approximately 0.25 miles east of the project area, and the West Hills Community College is approximately 0.2 miles to the south.

At the time of the survey, the Survey Area north of the railroad track consisted entirely of disked agricultural land that historically has been in cultivation. The project site and the Surveyed Area to its east and west were mostly unvegetated, although some desiccated ruderal species, such as red brome (*Bromus madritensis* ssp. *rubens*) and pigweed amaranth (*Amaranthus albus*), were observed along the edges of dirt roads where disking had not occurred. The recently harvested field north of the project area was covered in a sparse layer of new growth, which could not be identified but is likely non-native. There was some abandoned agricultural equipment just northeast of the project, within the Survey Area.

South of the railroad track, the Survey Area supports Valley Sink Scrub habitat. Most of this area was fenced and inaccessible to pedestrian surveys but was surveyed visually with binoculars. Based on historical imagery, this habitat has been disturbed in the past and is likely of low to moderate quality of suitable habitat for special-status species. Species typical of Valley Sink Scrub habitat such as seepweed (*Suaeda nigra*) and alkali heath (*Frankenia salina*) were observed, scattered within barren areas.

The wildlife species observed during the survey were typical of cultivated and uncultivated agricultural lands. Several native bird species were observed including horned lark (*Eremophila alpestris*) and common raven (*Corvus corax*). Other wildlife sign included domesticated dogs (*Canis familiaris*) and horses (*Equus caballus*). Inactive California ground squirrel (*Otospermophilus beecheyi*) burrows were observed scattered in low densities along roadsides. There was sign of human disturbance i.e., footprints and vehicle tracks, were observed on the project area and adjacent agricultural lands.

The Valley Sink Scrub habitat south of the project area could not be surveyed on foot, but two northern harriers (*Circus hudsonius*), a species typical of this habitat type, were observed flying over the site as well as over the project area.

There were 13 plant species, eight bird species, and five mammal species identified during the survey, either through direct observation or by the presence of diagnostic signs (Table 3.4.4-1). None of these species are listed under the Federal or California Endangered Species Acts, but the northern harrier is listed as a CDFW Species of Special Concern.

Impact Analysis

Impacts #3.4.4a – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The literature and database searches indicated that there is potential for multiple special-status plant and wildlife species to be present on or in the vicinity of the project. An evaluation of each of the potential special-status species, which included habitat requirements, likelihood of required habitat to occur within the project area, and a comparison to the CNDDB records was conducted. The results of this evaluation concluded that no special-status plant species and four wildlife species have a reasonable potential to occur on or near the project.

Table 3.4.4-1
List of Plant and Wildlife Species Observed on the Project Site

Scientific name	Common name
Plants	
Amaranthus albus	pigweed amaranth
Amsinckia sp.	fiddleneck
Atriplex lentiformis	big saltbush
Bromus madritensis ssp. *rubens*	red brome
Carduus pycnocephalus	Italian thistle
Distichlis spicata	salt grass
Frankenia salina	alkali heath
Helianthus sp.	sunflower
Heterotheca grandiflora	telegraph weed
Salsola tragus	Russian thistle
Sisymbrium irio	London rocket
Sorghum halepense	johnsongrass
Suaeda nigra	seepweed
Wildlife	
Canis familiaris	domestic dog*
Charadrius vociferus	killdeer
Circus hudsonius	northern harrier
Corvus corax	common raven
Equus caballus	domestic horse*
Eremophila alpestris	horned lark
Falco sparverius	American kestrel
Haemhorous mexicanus	house finch
Otospermophils beecheyi	California ground squirrel*
Passerculus sandwichensis	savannah sparrow
Sayornis nigricans	black phoebe
Sylvilagus audobonii	desert cottontail*
Thomomys bottae	Botta's pocket gopher*

Special-Status Species

SPECIAL-STATUS PLANT SPECIES

Based on the survey and database queries, there are seven special-status plant species that have the potential to occur within the subject quadrangle and eight surrounding quadrangles: brittlescale (*Atriplex depressa*), recurved larkspur (*Delphinium recurvatum*), vernal barley (*Hordeum intercedens*), alkali sink goldfields (*Lasthenia chrysantha*), Panoche peppergrass (*Lepidium jaredii* ssp. *album*), mud nama (*Nama stenocarpa*), and California alkali grass (*Puccinellia simplex*). There are CNDDB records for six of these species within the nine-quad query; there is no record for vernal barley, which was identified by the CNPS query.

The project area has been historically and repeatedly disturbed for many years for agricultural purposes and is currently highly disturbed. The project area is barren with some ruderal plant species along its edges. Because of its current condition, routine maintenance, and historical disturbance, it is unlikely that the project area would still support any rare native plant species.

The Valley Sink Scrub in the Survey Area south of the project site has not been disturbed and could potentially support brittlescale, recurved larkspur, vernal barley, alkali sink goldfields, and California alkali grass; it does not provide suitable habitat for Panoche peppergrass or mud nama. However, all project activities will be restricted to within the project site boundaries and will not impact this area. Thus, no protective measures for special-status plant species are warranted.

SPECIAL-STATUS WILDLIFE SPECIES

Based on the database queries there were 22 special-status wildlife species that were identified as having a potential to occur within the subject quadrangle and eight surrounding quadrangles. Nineteen of these species were eliminated from consideration due to the lack of suitable habitat. California red-legged frog (*Rana draytonii*), delta smelt (*Hypomesus transpacificus*), giant garter snake (*Thamnophis gigas*), western pond turtle (*Emys marmorata*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), western ridged mussel (*Gonidea angulata*), and western spadefoot (*Spea hammondii*) are dependent upon water bodies and/or vernal pools, which are not present within the Survey Area.

There were no CNDDB records for California red-legged frog, delta smelt, vernal pool fairy shrimp, or vernal pool tadpole shrimp in the nine-quad database query. Hoary bat (*Lasiurus cinereus*) roosts in dense foliage of medium to large trees, typically in forests, which were not present on or near the project area. There are no elderberry shrubs (*Sambucus* sp.) in the Survey Area so valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) would not be present. San Joaquin tiger beetle (*Cicindela tranquebarica joaquinensis*) is highly associated with sandy soils, which are not present in the Survey Area. There is no suitable nesting or foraging habitat for black-crowned night heron (*Nycticorax nycticorax*), tricolored blackbird (*Agelaius tricolor*), western snowy plover (*Charadrius alexandrinus* nivosus), or yellow-headed blackbird (*Xanthocephalus xanthocephalus*), which require wetlands, marshes, dry lakes, or sandy beaches.

There is no suitable habitat for blunt-nosed leopard lizard (*Gambelia sila*), California glossy snake (*Arizona elegans occidentalis*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), or Tipton kangaroo rat (*D. n. nitratoides*) within the Survey Area; the ground is predominantly devoid of vegetation and there were no suitable burrows observed during the survey. It is possible that these four species may be present in the remnant Valley Sink Scrub habitat south of the railroad track, but this area will not be affected by project activities and it is very unlikely that any individuals would leave this habitat to enter the project.

CNDDB records did not appear for the American badger (*Taxidea taxus*) in the nine-quad database queries. Badger is considered a very uncommon species to encounter in agricultural and residential areas of the California Central Valley; there is no suitable habitat for the species in the Survey Area.

The remaining three species that have the potential to occur within the project site and vicinity include burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsonsi*), and San Joaquin kit fox (*Vulpes macrotis mutica*).

The northern harrier, a CDFW Species of Special Concern, was observed during the reconnaissance survey.

Nesting birds protected by the federal Migratory Bird Treaty Act (MBTA) may also be present during the breeding season.

San Joaquin Kit Fox

San Joaquin kit fox, a Federally Endangered and State Threatened species, has potential to occur in the remnant Valley Sink Scrub habitat south of the project, but is unlikely to be present within the Survey Area or in the surrounding agricultural areas due to the lack of suitable burrows for occupancy and available prey base. The nearest CNDDB record for the species is from 2002 and approximately 1.4 miles northwest of the project area, documenting one San Joaquin kit fox that was observed in a agricultural field during a spotlighting effort (EONDX 66434). The remnant Valley Sink Scrub may provide suitable habitat for the species. However, the denuded agricultural areas within the Survey Area provide no cover for the species, offer very limited to no prey base, and show sign of domestic dog presence, which may deter San Joaquin kit fox from utilizing the area. No San Joaquin kit foxes, known kit fox dens, or potential dens were observed during the survey.

Although there is no suitable habitat for San Joaquin kit fox on the project area, the species may be present on the project from time to time as a transient. Because the project does not support suitable habitat, development of the project area would not result in any loss of habitat for the species. If the species were to be present on the project during construction activities, individual San Joaquin kit foxes could be injured or killed, or normal dispersal or foraging behaviors could be affected.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a State Threatened species and has potential to occur in the habitat around the project, but it very unlikely to be present within the Survey Area. Swainson's hawks forage in agricultural fields, shrublands, and grasslands, and typically nest in scattered trees or small groves. There are very few, mainly inactive, small mammal burrows in the agricultural land in the Survey Area, so it does not provide a sufficient prey base. There is likely suitable foraging habitat south of the project site. There is marginally suitable nesting habitat at the West Hills Community College south of the project, but these trees are relatively small and exposed to routine human presence. There are no other

suitable nesting trees within 0.5 miles of the project area. The nearest CNDDB occurrence is 3.9 miles northwest of the project, where one or a pair of Swainson's hawks were exhibiting breeding behavior in March 2016 (EONDX 115241).

Swainson's hawk may forage in the Valley Sink Scrub south of the project, and the planted trees at the college campus provide marginal nesting habitat. The project area contains no foraging or nesting habitat for the species. As such, development of the project site would not result in any loss of habitat for the species. Swainson's hawk is unlikely to be nesting on the college campus, and there are no other suitable nesting trees within 0.5 miles of the project.

Burrowing Owl

Burrowing owl (*Athene cunicularia*), a CDFW Species of Special Concern, has potential to occur in the Valley Sink Scrub habitat south of the project site, but is unlikely to be present within the project area or in the surrounding agricultural areas. The nearest CNDDB record is approximately 4.8 miles southwest of the project site, where a nesting burrowing owl was observed at the Lemoore Naval Air Station in 2000 (EONDX 77779). The majority of the Survey Area provides no cover for the species and offers very limited to no prey base. However, habitat present in the southern portion of the Survey Area may provide suitable habitat for the species. No burrowing owls, known burrows, or other signs of the species were observed during the survey.

There is no suitable habitat for burrowing on the project site, and it is not expected to become established on the project area but may be present on the project site from time to time as a transient. The project area does not support suitable habitat; therefore, development of the project area would not result in any loss of habitat for the species. If the species were to be present on the project during construction activities, individual burrowing owls could be injured or killed, or normal dispersal or foraging behaviors could be affected.

Northern Harrier

Northern harrier (*Circus hudsonius*), a CDFW Species of Special Concern, has potential to occur in the habitat south of the project. There were no CNDDB occurrences for the species in the nine-quad search, but two individuals were observed during the reconnaissance survey. The agricultural areas within the Survey Area, including the project site, do not offer suitable nesting habitat. The scrub south of the project provides both foraging and nesting habitat.

There is no suitable foraging or nesting habitat for the northern harrier on the project and it is not expected to become established on the project, but because it is adjacent to suitable habitat, the species may be present on the project from time to time as a transient. The project does not support suitable habitat, and development of the project area would not result in any loss of habitat for the species. If the species were to be present on the project during construction activities, individual burrowing owls could be injured or killed, or normal dispersal or foraging behaviors could be affected.

Nesting Migratory Birds

Migratory bird species are protected under the Federal MBTA. No active or inactive bird nests were observed during the survey. The project provides marginal nesting habitat for ground nesting species such as killdeer (*Charadrius vociferous*) and horned lark. If nesting migratory birds are in the vicinity of the project area during construction activities, individual birds could be injured or killed, or normal reproductive or foraging behaviors could be affected.

CONCLUSION

The project area is on agricultural land, which has been historically cultivated for decades. The Survey Area and surrounding areas are mainly devoid of vegetation, but support some non-native grasses and other ruderal species, although there is small amount of Valley Sink Scrub south of the project site.

One special-status wildlife species, northern harrier, was observed during the survey.

It is very unlikely that any special-status plant species occur in the project area or in the immediate vicinity due to historic agricultural development and the current vegetation maintenance regimen. No minimization, avoidance, or mitigation measures related to special-status plants are warranted.

There is the potential for some special-status or wildlife species to be impacted by project activities. Mitigation Measures MM BIO-1 through MM BIO-8, as provided below, would protect, avoid, and minimize impacts to special-status wildlife species. When implemented, these measures would reduce impacts to these species to levels that are less than significant.

Through implementation of the mitigation measures listed below, impacts of the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. Therefore, the project will have a less-than-significant impact with incorporation of mitigation measures.

MITIGATION MEASURE(S)

MM BIO-1: Prior to ground disturbing activities, a qualified wildlife biologist, knowledgeable in the species discussed above and approved by CDFW, shall conduct a biological pre-construction clearance survey between 14 and 30 days prior to the onset of construction.

The clearance survey shall include walking transects to identify presence of San Joaquin kit fox, Swainson's hawk, burrowing owl, northern harrier, and any other special-status species and their sign. The pre-construction survey shall be walked by no greater than 50-foot transects for 100 percent coverage of the project and a 500-foot buffer, where feasible. If no evidence of special-status species is detected, MM BIO-2 and BIO-4 may not apply.

MM BIO-2: If dens capable of supporting San Joaquin kit fox are identified while conducting MM BIO-1, the avoidance buffers outlined below shall be established. No work can occur within these buffers unless the biologist approves and monitors the activity.

- Potential or Atypical den – 50 feet
- Known den – 100 feet
- Natal or pupping den – 500 feet, unless otherwise specified by CDFW

MM BIO-3: The following avoidance and minimization measures shall be implemented during all phases of the project to reduce the potential for impact from the project. They are modified from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered SJKF Prior to or During Ground Disturbance* (USFWS 2011, Appendix F).

a. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction or project site.
b. Construction-related vehicle traffic shall be restricted to established roads and predetermined ingress and egress corridors, staging, and parking areas. Vehicle speeds shall not exceed 20 miles per hour (mph) within the project site.
c. To prevent inadvertent entrapment of kit fox or other animals during construction, the contractor shall cover all excavated, steep-walled holes or trenches more than two feet deep at the close of each workday with plywood or similar materials. If holes or trenches cannot be covered, one or more escape ramps constructed of earthen fill or wooden planks shall be installed in the trench. Before such holes or trenches are filled, the contractor shall thoroughly inspect them for entrapped animals. All construction-related pipes, culverts, or similar structures with a diameter of four inches or greater that are stored on the project site shall be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If at any time an entrapped or injured kit fox is discovered, work in the immediate area shall be temporarily halted and the approved biologist shall be consulted.
d. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS and CDFW have been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
e. No pets, such as dogs or cats, shall be permitted on the project sites to prevent harassment, mortality of kit foxes, or destruction of dens.

f. Use of anti-coagulant rodenticides and herbicides in project sites shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS and CDFW. If rodent control must be conducted, zinc phosphide shall be used because of the proven lower risk to kit foxes.
g. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the CDFW and USFWS.
h. The Sacramento Fish and Wildlife Office of USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a SJKF during project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at (559) 243-4014 and R4CESA@wildlifeca.gov.
i. All sightings of the SJKF shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to the Service at the address below.
j. Any project-related information required by the USFWS or questions concerning the above conditions, or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone: (916) 414-6620 or (916) 414-6600.
k. New sightings of SJKF shall be reported to the CNDDB.

MM BIO-4: If any burrowing owl burrows are observed during the pre-construction survey conducted during MM BIO-1, avoidance measures shall be consistent with those included in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). If occupied burrowing owl burrows are observed outside of the breeding season (September 1 through January 31) and within 250 feet of proposed construction activities, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (CDFG, 2012). During the breeding season (February 1 through August 31), a 500-foot (minimum) buffer zone shall be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

In addition, impacts to occupied burrowing owl burrows shall be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-

invasive methods that either: (1) the birds have not begun egg laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

MM BIO-5: If all project activities are completed outside of the Swainson's hawk nesting season (February 15 through August 31), this mitigation measure may not apply.

Nesting surveys for Swainson's hawk shall be conducted in accordance with the protocol outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFG, 2000). If potential Swainson's hawk nests or nesting substrates are located within 0.5 miles of the project site, then those nests or substrates must be monitored for activity on a routine and repeating basis throughout the breeding season, or until Swainson's hawks or other raptor species are verified to be using them. The protocol recommends that the following visits be made to each nest or nesting site: one visit during January 1–March 20 to identify potential nest sites, three visits during March 20–April 5, three visits during April 5–April 20, and three visits during June 10–July 30. A fewer number of visits may be permissible if deemed adequate by the City after consultation with a qualified biologist. To meet the minimum level of protection for the species, surveys shall be completed for at least the two survey periods immediately prior to project-related ground disturbance activities. If Swainson's hawks are not found to nest within the survey area, then no further action is warranted.

MM BIO-6: If an active Swainson's hawk nest is discovered at any time within 0.5 miles of active construction, a qualified biologist shall complete an assessment of the potential for current construction activities to impact the nest. The assessment will consider the type of construction activities, the location of construction relative to the nest, the visibility of construction activities from the nest location, and other existing disturbances in the area that are not related to construction activities of this project. Based on this assessment, the biologist shall determine if construction activities can proceed and the level of nest monitoring required. Construction activities shall not occur within 500 feet of an active nest but depending upon conditions at the site this distance may be reduced. Fulltime monitoring by a qualified biologist to evaluate the effects of construction activities on nesting Swainson's hawks may be required. The qualified biologist shall have the authority to stop work if it is determined that project construction is disturbing the nest. These buffers may need to increase depending on the sensitivity of the nest location, the sensitivity of the nesting Swainson's hawk to disturbances, and at the discretion of the qualified biologist.

MM BIO-7: If construction is planned outside the nesting period for raptors (other than Swainson's hawk and burrowing owl) and migratory birds (February 15 to August 31), this mitigation measure may not apply.

If construction is planned during the nesting season for migratory birds and raptors, a pre-construction survey to identify active bird nests shall be conducted by a qualified biologist to evaluate the site and a 250-foot buffer for migratory birds and a 500-foot buffer for raptors. If nesting birds are identified during the survey, active raptor nests shall be avoided by 500 feet and all other migratory bird nests shall be avoided by 250 feet. Avoidance buffers may be reduced if a qualified onsite monitor determines that encroachment into the buffer area is not affecting nest building, the rearing of young, or otherwise affecting the breeding behaviors of the resident birds. Because nesting birds can establish new nests or produce a second or even third clutch at any time during the nesting season, nesting bird surveys shall be repeated every 30 days as construction activities are occurring throughout the nesting season.

No construction or earth-moving activity shall occur within a non-disturbance buffer until it is determined by a qualified biologist that the young have fledged (left the nest) and have attained sufficient flight skills to avoid project construction areas. Once the migratory birds or raptors have completed nesting and young have fledged, disturbance buffers will no longer be needed and may be removed, and monitoring may cease.

MM BIO-8: Prior to ground disturbance activities, or within one week of being deployed at the project site for newly hired workers, all construction workers at the project site shall attend a Construction Worker Environmental Awareness Training and Education Program, developed and presented by a qualified biologist.

The Construction Worker Environmental Awareness Training and Education Program shall be presented by the biologist and shall include information on the life history wildlife and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures the project operator is implementing to protect the species, reporting requirements, specific measures that each worker must employ to avoid take of the species, and penalties for violation of the Act. Identification and information regarding special-status or other sensitive species with the potential to occur on the project site shall also be provided to construction personnel. The program shall include:

- An acknowledgement form signed by each worker indicating that environmental training has been completed.
- A copy of the training transcript and/or training video/CD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms shall be maintain onsite for the duration of construction activities.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.4b – Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

There is one historic CNDDB occurrence of Valley Sink Scrub, approximately 3.6 miles south of the project (EONDX 16344). This sensitive natural community was observed within the survey buffer south of the project, but not within the survey footprint. This area was not accessible on foot but was assessed using binoculars. All project activities will be restricted to the project area, and this Valley Sink Scrub habitat will not be impacted by the project.

The project is not located within a river or an area that encompasses a river or potential floodplain and does not contain nor is near any riparian habitat. The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. Therefore, the project would have no impact and no mitigation measures are required.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact.*

Impact #3.4.4c – 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 United States Army Corps of Engineers (USACE) has regulatory authority over the Clean Water Act (CWA), as provided for by the EPA. The USACE has established specific criteria for the determination of wetlands based upon the presence of wetland hydrology, hydric soils, and hydrophilic vegetation. No federally protected wetlands or vernal pools occur within the Survey Area.

Wetlands, streams, reservoirs, sloughs, and ponds typically meet the criteria for federal jurisdiction under Section 404 of the CWA and State jurisdiction under the Porter-Cologne Water Quality Control Act. Streams and ponds typically meet the criteria for State jurisdiction under Section 1602 of the California Fish and Game Code. There is a freshwater pond 0.3 miles southwest of the project site, but it will not be impacted by project activities.

Although there is a small portion of an historic water feature identified as a "riverine" by the National Hydrography Dataset. Previous historical agricultural disturbance has eliminated

this feature and it was not observed during the reconnaissance survey. As noted, there are no features on or near the project that would meet the criteria for either federal or State jurisdiction. Accordingly, there are no wetlands or Waters of the U.S. occurring on the project site. There would be no impact to federally protected wetlands or waterways as a result of the proposed project. Therefore, the project would have no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.4d – Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife migratory corridors are described as a narrow stretch of land that connects two open pieces of habitat that would otherwise be unconnected. These routes provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodlands, or forested habitats that span contiguous acres of undisturbed habitat and are important elements of resident species' home ranges.

The project site falls within the Pacific Flyway, a significant migratory route encompassing the west coast of North America. However, the project represents a very small amount of acreage within this territory and does not support any significant migratory stopover habitat. The proposed project and surrounding area does not occur within a known terrestrial migration route, significant wildlife corridor, or linkage area as identified by the Essential Habitat Connectivity project (Spencer, W.D., et al, 2010). The survey conducted for the project did not provide evidence of a wildlife nursery or important migratory habitat being present on the project site. Migratory birds and raptors could use habitat on and near the project for foraging and/or as stopover sites during migrations or movement between local areas.

Construction of the project will not restrict, eliminate, or significantly alter a wildlife movement corridor, wildlife core area, or Essential Habitat Connectivity area, either during construction or after the project has been constructed. The project site does not contain any undisturbed habitat that would facilitate wildlife movement. project construction will not substantially interfere with wildlife movements or reduce breeding opportunities.

The proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Therefore, the project's impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impacts #3.4.4e – Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Besides requiring compliance with State policies, the City of Lemoore does not have any local policies or ordinances protecting biological resources nor an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plans protecting biological that would apply to this project site. Therefore, implementation of the proposed project would have no conflict related to an adopted local policies or ordinances protecting biological resources.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.4f – 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 is not located within any habitat conservation plan, natural community conservation plan, or any other local, regional, or State conservation plan. Therefore, implementation of the proposed 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, and there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.5 - CULTURAL RESOURCES				
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion

This analysis is based on a Phase I Cultural Resource Survey prepared for the project (Hudlow Cultural Resource Associates, 2021), which is included as Appendix B. A Sacred Lands File (SLF) request was submitted to the Native American Heritage Commission (NAHC) and the results of that research is also included in Appendix B.

Impact #3.4.5a – Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

A record search of the project area and the environs within one-half mile was conducted at the Southern San Joaquin Archaeological Information Center. The record search revealed that two surveys have previously been conducted on the project site, and 11 cultural resource surveys have been conducted within one-half mile of the project area. No historic cultural resources have been located on the current project area; however, two historic cultural resources have been recorded within one-half mile of the current project area, including the Union Pacific/ San Joaquin Valley Railroad, which is directly adjacent to the parcel but not within the project boundaries. The second resource is a historic canal (Hudlow Cultural Resource Associates, 2021). The development of the proposed project will not impact either of these historic cultural resources.

Although agricultural activities have disturbed the project site, unknown historical resources may be discovered during ground-disturbing activities. In order to account for unanticipated discoveries and the potential to impact previously undocumented or unknown resources, the following mitigations measures are recommended. Mitigation Measure MM CUL-1 requires having a tribal monitor onsite during initial ground disturbance. MM CUL-2 outlines the process in the unlikely event cultural resources are discovered during construction and MM CUL-3 describes the disposition of those cultural

resources. With the implementation of MM CUL-1 through MM CUL-3, impacts under this criterion would be less than significant with mitigation.

MITIGATION MEASURE(S)

MM CUL-1: Prior to any ground disturbance, a surface inspection of the site shall be conducted by a Tribal Monitor. The Tribal Cultural Staff shall monitor the site during grading activities. The Tribal Cultural Staff shall provide preconstruction briefings to supervisory personnel and any excavation contractor, which will include information on potential cultural material finds, and on the procedures, to be enacted if resources are found. Prior to any ground disturbance, the applicant shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during initial ground-disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the tribe.

MM CUL-2: If historical or archaeological cultural resources are discovered during construction or operations, activities shall stop within 100 feet of the find, and a qualified archeologist shall determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist.

The Lead Agency along with other relevant or tribal officials, shall be contacted upon the discovery of cultural resources to begin coordination on the disposition of the find(s). Treatment of any significant cultural resources shall be undertaken with the approval of the Lead Agency.

MM CUL-3: Upon coordination with the Lead Agency, any archaeological artifacts recovered shall be donated to an appropriate tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.5b – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric

(before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euro-American occupation of the area. No archaeological resources were identified during the Phase I Cultural Resource Survey (Hudlow Cultural Resource Associates, 2021). A SLF request to the NAHC was submitted for the project. A response from the NAHC with negative results was received on March 2, 2021 (see Appendix B). Based on the information provided, implementation of MM CUL-1 through MM CUL-3 would ensure that potential impacts associated with archaeological during the construction phase would be less than significant.

MITIGATION MEASURE(S)

Implementation of MM CUL-1 through MM CUL-3.

Impact #3.4.5c – Would the project disturb any human remains, including those interred outside of formal cemeteries?

Human remains are not known to exist within the project area. However, construction would involve earth-disturbing activities, and it is still possible that human remains may be discovered, possibly in association with archaeological sites. MM CUL-4 has been included in the unlikely event that human remains are found during ground-disturbing activities. Impacts would be less than significant with implementation of mitigation.

MITIGATION MEASURE(S)

MM CUL-4: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County Coroner.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated***.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.6 - ENERGY				
Would the project:				
a. Result in a 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?	☐	☐	☒	☐

Discussion

The analysis of the project's energy impacts are based on the Air Quality, Greenhouse Gas, and Energy Impact Assessment prepared for the project, which is included in Appendix A (Stantec Consulting Services, 2021).

Impact #3.4.6a – Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Methodology

The energy requirements for the proposed project were determined using the construction and operational estimates generated from the Methodology and Modeling Assumptions (see Appendix A). Short-term construction energy consumption is discussed below.

This impact addresses the energy consumption from both the short-term construction and long-term operations are discussed separately below.

SHORT-TERM CONSTRUCTION

The proposed project is anticipated to be constructed in two phases beginning in 2022 with completion in 2026. Table 3.4.6-1 provides an estimate of the project's energy use during construction. The first phase of construction is anticipated to use 9,091 gallons of gasoline and diesel fuel for the construction worker on-road vehicles and 33,345 gallons of diesel fuel for the off-road construction equipment. The second phase of construction is anticipated to use 4,210 gallons of gasoline and diesel fuel for the construction worker on-road vehicles and 28,654 gallons of diesel fuel for the off-road construction equipment.

There are no unusual project characteristics that would necessitate the use of construction vehicles or equipment that would be less energy efficient than at comparable construction sites in other parts of the State. Therefore, it is expected that construction energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Table 3.4.6-1
Summary of Energy Use During Construction (Annual)

Component	Source	Energy Use
Phase 1	Construction worker vehicle fuel	9,091 gallons (gasoline, diesel)
	Construction off-road equipment fuel	33,345 gallons (diesel)
Phase 2	Construction worker vehicle fuel	4,210 gallons (gasoline, diesel)
	Construction off-road equipment fuel	28,654 gallons (diesel)
	Total	75,301 gallons (gasoline, diesel)

Source: Stantec 2021

LONG-TERM OPERATIONS

Table 3.4.6-2 provides an estimate of the long-term energy use associated with the project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed project.

Table 3.4.6-2
Summary of Energy Use During Operation (Annual)

Source	Energy Use
Operational vehicle fuel consumption	139,137 gallons (gasoline, diesel)
Operational natural gas consumption	5,344,760 kilo-British Thermal Units
Operational electrical consumption	1,285,070 kilowatt hours

Annual consumption is estimated at 139,137 gallons. The proposed project would consolidate existing operations and constitute development within an established community. As such, it would not be opening a new geographical area for development, nor would it result in a substantial number of new trips or substantially lengthen existing trips.

Buildings constructed pursuant to the proposed project would comply with the versions of CCR Titles 20 and 24, including California Green Building Standards (CALGreen), that are applicable at the time that building permits are issued. The proposed project is estimated to demand 1,285,070 kilowatt hours of electricity per year and 5,344,760 kilo-British Thermal Units of natural gas per year. This would represent an increase in demand for electricity and natural gas.

It would be expected that building energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the region. Current State regulatory requirements for new building construction

contained in the 2019 CALGreen and Title 24 standards would increase energy efficiency and reduce energy demand in comparison to existing commercial structures, and therefore would reduce actual environmental effects associated with energy use from the proposed project. Additionally, the CALGreen and Title 24 standards have increased efficiency standards through each update.

Therefore, while the proposed project would result in increased electricity and natural gas demand, the electricity and natural gas would be consumed more efficiently and would be typical of a manufacturing facility. Compliance with future building code standards would result in increased energy efficiency. For the above reasons, energy impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.6b – Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

There is no State plan for energy efficiency, however, there are existing regulations under CCR Titles 20 and 24, including CALGreen. There is no applicable local plan for renewable energy or energy efficiency. The City has addressed energy use in buildings and other structures by promoting energy conservation through various General Plan policies. For example, the City will require new developments to use different techniques to improve energy efficiency, including building/site orientation and construction, articulated windows, roof overhangs, appropriate building and insulation materials and techniques, and other architectural features that improve passive interior climate control. The City will also encourage landscaping methods, materials, and designs that promote energy conservation and will preserve existing trees and plant new trees along streetscapes to provide shade.

The proposed project would comply with applicable local and State codes and regulations at the time that building permits are issued and with all applicable City measures.

The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency through adherence to State regulatory measures and City General Plan policies; impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant.***

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.7 - GEOLOGY AND SOILS				
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including Liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Discussion

The responses in this section were based on the 2030 Lemoore General Plan and the California Department of Conservation, 2020.

Impact #3.4.7a(i) – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

According to the City of Lemoore 2030 General Plan, there are no known major fault systems within Lemoore (City of Lemoore, 2008). The greatest potential for geologic disaster in the City is posed by the San Andres Fault, which is located approximately 60 miles west of the Kings County boundary line within Monterey County.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone. (California Department of Conservation, 2021). There are no active fault traces in the project vicinity. Accordingly, the project area is not within an Earthquake Fault Zone and will not require a special site investigation by an Engineering Geologist. The proposed project will comply with all applicable local and State building and development codes. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.7a(ii) – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

See response to Impact #3.4.6a(i).

Secondary hazards from earthquakes include ground shaking/rupture. Since there are no known faults within the immediate area, ground shaking/rupture from surface faulting should not be a potential problem. Seiche and landslides are not potential hazards in the area. Lastly, deep subsidence problems may be low to moderate according to the conclusions of the Five County Seismic Safety Element. However, there are no known occurrences of structural or architectural damage due to deep subsidence in the Lemoore area.

According to the Seismic Safety Map contained within the Health and Safety Element of the 2035 Kings County General Plan (Figure HS-2, page HS-10), the project site is located within an area designated as Zone V1 or Valley Zone 1, which is identified as the area of least

expected seismic shaking by the Kings County Seismic Zone Description in the 2035 General Plan (Kings County, 2016).

The project shall adhere to all applicable local and State regulations to reduce any potentially significant impacts to structures resulting from strong seismic ground shaking at the project site. Therefore, project impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.7a(iii) - Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

See discussion of Impacts #3.4.7a(i) and a(ii), above.

The potential magnitude/geographic extent of expansive liquefaction erosion was deemed 'negligible' and its significance 'low' throughout the City (City of Lemoore, 2012). Liquefaction is possible in local areas during a strong earthquake or other seismic ground shaking, where unconsolidated sediments coincide with a high-water table.

Adherence to all applicable local and State regulations would avoid any potential impacts to structures resulting from liquefaction at the project site. Adherence to all applicable regulations would reduce or avoid any potential impacts to structures resulting from liquefaction at the project site and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.6a(iv) – Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

See discussion of Impacts #3.4.7a(i) through a(iii), above.

The land is relatively flat with no significant topological features. As such, there is no potential for rock fall and landslides to impact the project in the event of a major earthquake, as the area has no dramatic elevation changes. Secondary hazards from earthquakes include

ground shaking/rupture, seiche, landslides, liquefaction, and subsidence. Since there are no known faults within the immediate area, ground shaking/rupture from surface faulting should not be a potential problem. Seiche and landslide hazards are also not likely to occur. Lastly, deep subsidence problems may be low to moderate according to the conclusions of the Five County Seismic Safety Element. However, there are no known occurrences of structural or architectural damage due to deep subsidence in the Lemoore area.

The project site currently consists of undeveloped land and the surrounding area is essentially flat. The site's topography would not change substantially as a result of project development since the site is essentially flat in nature from previous activities with no surrounding slopes and it is not considered to be prone to landslides. The project would not expose people or structures to potential substantial adverse effects from landslides. Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.7b – Would the project result in substantial soil erosion or the loss of topsoil?

There are three types of soil found within the project site, Lakeside loam, Vanguard sandy loam, and Lemoore sandy loam (Figure 3.4.7-1).

Construction activities associated with the proposed project will disturb surface vegetation and soils during construction and would expose these disturbed areas to erosion by wind and water. To reduce the potential for soil erosion and loss of topsoil, the project would comply with the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit (No. 2012-0006-DWQ) during construction. Under the NPDES, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) are required for construction activities that would disturb an area of one acre or more. A SWPPP must identify potential sources of erosion or sedimentation as well as identify and implement Best Management Practices (BMPs) that reduce erosion and the possible water contamination. Typical BMPs intended to control erosion include sandbags, retention basins, silt fencing, street sweeping, etc.

Mitigation Measure MM GEO-1 requires the approval of a SWPPP to comply with the NPDES General Construction Permit. The project will comply with all the grading requirements as outlined in the City Municipal Code and development standards. During construction, the project is not expected to result in substantial soil erosion or the loss of topsoil with the incorporation of Mitigation Measure MM GEO-1.

MITIGATION MEASURE(S)

MM GEO-1: Prior to issuing of grading or building permits, the project applicant shall submit to the City: (1) the approved Stormwater Pollution Prevention Plan (SWPPP) and (2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the Central Valley Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. Recommended Best Management Practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly,
- Protecting existing storm drain inlets and stabilizing disturbed areas,
- Implementing erosion controls,
- Properly managing construction materials,
- Managing waste, aggressively controlling litter, and implementing sediment controls, and
- Evidence of the approved SWPPP shall be submitted to the Lead Agency.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.7c – 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 offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously discussed, the site soils are considered stable in that there is not a potential of on or offsite landslides, lateral spreading, subsidence or collapse. However, as discussed in Impact #3.4.7a(iii), the project site is potentially located on a geologic unit or soil that could potentially result in liquefaction.

All structures would be subject to all applicable City Building Ordinances and development standards. Adherence to all applicable regulations would reduce or avoid any potential impacts to structures at the project site, and impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7d – Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive clay soils are subject to shrinking and swelling due to changes in moisture content over the seasons. These changes can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. In dry periods, the same soils can collapse and result in settlement of structures.

There are predominantly two types of soil found within the project site: Lakeside loam and Lemoore sandy loam. The project will be required to be built to current building codes. Because of this, all construction will require engineered plans that take into account the soil and its relationship to the structures and their foundations.

Compliance with the policies of the City of Lemoore Municipal Code would reduce potential site-specific impacts to less-than-significant levels.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.7e – Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

The proposed project does not include the development or use of septic tanks or alternative wastewater disposal systems as the project would connect to the City's existing sewer system.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.7f – Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Geological records of the region and those prepared for the General Plan found no evidence of paleontological resources or unique geological features in Lemoore. Additionally, the Lemoore area has sedimentary rocks of tertiary and quaternary age, which are younger rocks of continental origin. The project is in an area identified as having geologic features from the Latest Holocene that are at least 150 years before present age but no more than

2000 years before present age, which is considered to have low potential for paleontological resources (Meyer, Jack et al, 2010).

However, there is a possibility that future ground-disturbing activities could cause damage to, or destruction of, previously undiscovered paleontological resources or unique geologic features. Implementation of MM GEO-2 would reduce potential impacts to a less-than-significant level. In addition, the Lemoore General Plan policies and guidelines direct the City to require construction to stop immediately if paleontological resources are uncovered during grading or other onsite excavation activities, until appropriate mitigation is implemented. Therefore, with MM GEO-2, the project will have a less-than-significant impact.

MITIGATION MEASURE(S)

MM GEO-2: If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

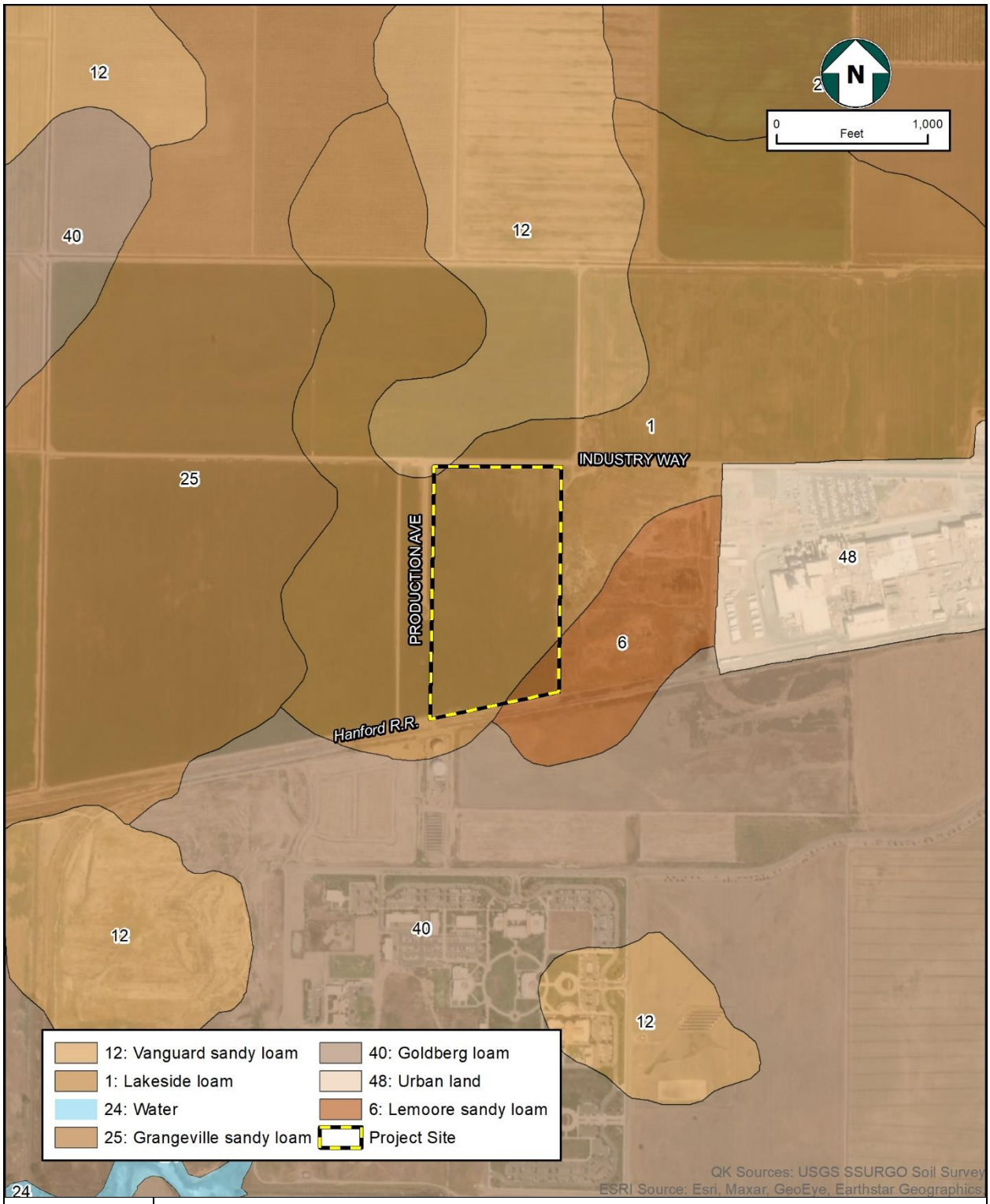

Figure 3.4.7-1
Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.8 - GREENHOUSE GAS EMISSIONS				
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

The analysis of the project's greenhouse gases (GHG) emissions impacts are based on the Air Quality, Greenhouse Gas, and Energy Impact Assessment prepared for the project, which is included in Appendix A (Stantec Consulting Services, 2021).

Impact #3.4.8a – Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Methodology for Analysis

Under CEQA, establishing significance thresholds is at the discretion of the lead agency. Outside of adopting their own thresholds, lead agencies often look to guidance provided by expert resource agencies such as the CARB or the applicable air pollution control district (APCD) or air quality management district (AQMD) whose purpose is to provide technical guidance on the resources they oversee. Many APCDs and AQMDs provide guidance on the assessment of air quality and GHG emissions and their potential for significant impacts and also provide recommendations for mitigating impacts.

The proposed project falls within the jurisdiction of the SJVAPCD. The SJVAPCD guidance on determining impact significance recommends three conditions in which a project's impacts would be less than significant:

1. If the project complies with an approved GHG reduction plan: Climate Action Plans (CAPs) are typically the most applicable GHG reduction plans to the SJVAPCD criteria. The City of Lemoore does not have an adopted CAP.
2. If the project implements Best Performance Standards (BPS): The second criteria for evaluating significance, BPS, is intended for stationary sources and development projects. The SJVAPCD has established BPS for certain stationary sources and has provided draft BPS for development projects but not for an industrial type of project,

thus BPS standards would not apply. The project would implement BPS for its boilers as part of the permitting process.

3. The project reduces operational GHG emissions by at least 29 percent over BAU conditions (demonstrated quantitatively).

The final criteria, BAU, calls for an assessment of the statewide GHG emissions reduction from the BAU emission condition. In other words, an assessment of the reduction of GHG emissions at a future date that would be based on a percentage decrease of historic GHG levels (typically levels in the year 1990). Establishing the methodology for determining what BAU conditions and targets should be has been the subject of recent legislation and legal proceedings and is currently still unsettled. Both AB 32 (achieve 1990 GHG levels by 2020) and SB 32 goals (40 percent below 1990 GHG levels by 2030), EO S-3-05 (80 percent below 1990 GHG levels by 2050), and the legal proceedings surrounding assessments based on their standards have brought to light the validity of applying Statewide efficiency-based thresholds to project-level impact evaluations.

The Newhall Ranch (*Center For Biological Diversity, et al. v. California Department of Fish and Wildlife* [The Newhall Land and Farming Company, Real Party in Interest] [2015] 62 Cal.4th 204) decision affirmed that "thresholds only define the level at which an environmental effect 'normally' is considered significant; they do not relieve the lead agency of its duty to determine the significance of an impact independently." The Court went on in the decision to suggest approaches in which the lead agency could undertake to establish significance thresholds. Of the recommended approaches, establishment of a quantitative threshold is the most applicable to assessment of the project's impacts.

Establishment of Quantitative Thresholds

These quantitative thresholds can be established by APCDs and AQMDs based on best available data to determine quantitative values in which emissions beyond that value would result in a significant impact within their jurisdiction. To date, SJVAPCD has not adopted quantitative thresholds, so the City looked to nearby and similarly situated air districts to identify quantitative thresholds that would best evaluate the potential significance of the Program GHG emissions. A review of air districts with established quantitative thresholds shown in Table 3.4.8-1 identified that a stationary source threshold would be most applicable to the project since it is an industrial project. The East Kern Air Pollution Control District would be most like the project area. It should be noted that the 25,000 $MTCO_2e$ was based on achieving 2020 targets, therefore the 25,000 $MTCO_2e$ threshold was reduced by 40 percent to reflect achieving 2030 GHG targets.

The EKAPCD numerical threshold may be viewed as an acceptable CEQA assessment tool by SJVAPCD considering their absence of a recommended threshold (Stantec Consulting Services, 2021). The 15,000 $MTCO_2e$ threshold is used to determine the project's potential to generate GHG emissions that may have a significant impact on the environment or conflict with an applicable GHG plan, policy, or regulation.

Table 3.4.8-1
Adopted GHG CEQA Quantitative Significance Thresholds in California

Agency	Construction Threshold ($MTCO_2e$)	Operational Threshold ($MTCO_2e$)
Bay Area Air Quality Management District	N/A	Project: 1,100 Stationary: 10,000
East Kern Air Pollution Control District	N/A	Stationary: 25,000
Monterey Bay Unified Air Pollution Control District	N/A	Stationary: 25,000
Mojave Desert Air Quality Management District	100,000	100,000
Antelope Valley Air Quality Management District	100,000	100,000
Santa Barbara County Air Pollution Control District	N/A	Stationary: 10,000
San Luis Obispo Air Pollution Control District	N/A	Project: 1,150 Stationary: 10,000
South Coast Air Quality Management District	N/A	Commercial Project: 1,400 Mixed Use Project: 3,000 Residential Project: 3,500 Stationary: 10,000
Sacramento Metropolitan Air Quality Management District	1,100[1]	Project: 1,100 Stationary: 10,000

Notes:
1. SMAQMD states in its CEQA guidance that "Lead agencies may decide to amortize the level of short-term construction emissions over the expected (long-term) operational life of a project."
Key:
$MTCO_2e$ = million tons of carbon dioxide equivalent
N/A = not applicable

Additionally, the project's compliance with applicable measures from the AB 32 Scoping Plan, and the 2017 Scoping Plan Update (SB 32 target year) would be used to determine potential conflicts with GHG reduction plans.

Construction

Greenhouse gas emissions generated during all phases of construction were combined and are shown in Table 3.4.8-2. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions, however, other jurisdictions such as the South Coast Air Quality Management District (SCAQMD) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. The SCAQMD and SMAQMD recommend that construction emissions be amortized based on the life of the project (commercial projects – 20 years) and added to the operational emissions.

Table 3.4.8-2
Construction Greenhouse Gas Emissions

Construction Activity	$MTCO_2e$
2022	439
2023	66
2025	298
2026	39
Total	842
Amortized over 20 years[1]	42

Notes:
1. GHG emissions are amortized over the 20-year life of the proposed project.
Source: (Stantec Consulting Services, 2021)

Operation

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Additionally, the project's off-road operational equipment and stationary sources were included in the estimate. Table 3.4.8-3 provides a summary of the project's GHG emissions. Total GHG emissions would be 2,494 $MTCO_2e$, which would be well under the 15,000 $MTCO_2e$ threshold; the impact would be less than significant.

Table 3.4.8-3
Operation Greenhouse Gas Emissions

Component	Source	Emissions (metric tons/year) CO_2e
Buildout	2026 Total	2,452
	Amortized Construction Emissions	42
	Total	2,494
Threshold		15,000
Exceed Significance Thresholds?		No

As discussed previously under the air quality impact assessment, the estimated emissions provide a conservative estimate as the analysis shows all the operational emissions as "new" emissions, but there are existing operational emissions associated with current operations at the existing facilities. Thus, actual GHG emissions would likely be lower due to the consolidation of equipment and the use of newer, more efficient building materials and operational equipment. Based on this analysis, project related GHG emissions, either directly or indirectly, would have a less-than-significant impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.8b – Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

SJVAPCD Climate Change Action Plan

The SJVAPCD has adopted a CCAP, which includes suggested BPS for proposed non-residential development projects. Appendix J of the SJVAPCD Final Staff Report for the CCAP contains GHG reduction measures that are recommended by the SJVAPCD, however none of the measures would be applicable to the proposed project.

CARB Scoping Plan

There are no other local or regional Climate Action Plans applicable to the proposed project, therefore, the proposed project was evaluated for consistency against the CARB 2017 Scoping Plan. Table 3.4.8-4 provides a summary of the consistency determination.

Table 3.4.8-4
Consistency with SB 32 2017 Scoping Plan Update

Measure Name	Measure Description	Consistency Determination
SB 350 50% Renewable Mandate.	Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent.** The proposed project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
Low Carbon Fuel Standard	This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent.** Vehicles accessing the proposed project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent.** Employees can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year.

Measure Name	Measure Description	Consistency Determination
Short-Lived Climate Pollutant (SLCP) Reduction Strategy	The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent.** The project is not a source of SLCPs.
SB 375 Sustainable Communities Strategies	Requires Regional Transportation Plans to include a sustainable communities' strategy for reduction of per capita vehicle miles traveled.	**Not Applicable.** The proposed project does not include housing but would help provide additional jobs in the City to help balance the jobs to housing ratio. The proposed project would also not result in unanticipated growth as it is consistent with the applicable General Plan.
Post-2020 Cap-and-Trade Program	The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap- and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.

Source: (Stantec Consulting Services, 2021)

As demonstrated above, the proposed project would be consistent with applicable measures in the State's Scoping Plan. As discussed in Impact #3.4.8a, the proposed project does not exceed the quantitative threshold of 15,000 $MTCO_2e$.

The proposed project would not conflict with the goals and objectives of the SJVAPCD's CCAP, with CARB's 2017 Scoping Plan, or any other State or regional plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. As such, the proposed project would not conflict with an applicable plan; therefore, impacts would be considered less than significant.

MITIGATION MEASURES

No mitigation required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant.***

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.9 - HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. 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?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Discussion

Impact #3.4.9a – Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. The California Code of Regulation (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications and, to a limited extent, in residential areas. Hazardous wastes are defined in the same manner.

Construction

Construction of the project would involve the temporary transport and use of minor quantities of hazardous materials such as fuels, oils, lubricants, hydraulic fluids, paints and solvents. The types and quantities of hazardous materials to be used and stored onsite would not be of a significant amount to create a reasonably foreseeable upset or accident condition. The handling and transport of all hazardous materials onsite would be performed in accordance with all applicable federal, State, and local laws and regulations.

Hazardous and non-hazardous wastes would likely be transported to and from the Project site during the construction phase of the proposed project. Construction would involve the use of some hazardous materials, such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products. These materials are commonly used during construction activities and would not be disposed of on the project site. These materials are stored in appropriate storage locations and containers in the manner specified by the manufacturer and disposed of in accordance with local, federal, and State regulations.

Operations

The project will include the storage and blending of liquid and dry fertilizer. Bulk liquid dormant oil (Omni Oil) will also be stored onsite and transported via trucks. The liquid and dry fertilizer is transported to the site via trucks or by rail. Workers are trained to properly identify and handle all hazardous materials and will be instructed to follow established safety guidelines as outlined in the Chemical Handling Plan and Emergency Response Plan. Storage of fertilizer and other materials will be maintained within enclosed buildings with cement floors. There will be procedures and guidelines to prevent and minimize hazardous emergencies throughout all stages of construction and operation. Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. Any hazardous waste or debris that is generated during construction of the proposed

project would be collected and transported away from the site and disposed of at an approved offsite landfill or other such facility. In addition, sanitary waste generated during construction would be managed through the use of portable toilets, which would be located at reasonably accessible onsite locations.

If the project maintains more than 55 gallons of a liquid, 500 pounds of a solid, 200 cubic feet of a compressed gas, and/or the applicable State/federal threshold quantity for an extremely hazardous material, a Hazardous Materials Business Plan (HMBP) is required by Kings County Public Health Services Department, who acts as Kings County's Certified Unified Program Agency (CUPA). Mitigation Measure MM HAZ-1 requires the project to submit a HMBP to the California Environmental Protection Agency's California Environmental Reporting System (CERS) and show proof of the approved Plan to the CUPA.

During operation, personnel will perform a daily inspection of all bulk chemical locations for tank, line, and pump leaks. Employees will comply with the facility's Emergency Response Plan in order to prevent and minimize hazardous spills. During operation, different chemicals will be used at the plant. The Safety Data Sheets will be posted for each chemical used that will include precautionary statements for each chemical, first aid measures, firefighting measures, accidental release measures, handling and storage, exposure controls, physical and chemical properties, stability and reactivity, disposal considerations, and transport information. In the instance that there is release of a hazardous material, measures based on the approved HMBP and the facility's Emergency Response Plan and Chemical Handling Plan would be implemented. MM HAZ-1 would require the project proponent to also submit a copy of the approved HMBP, Chemical Handling Plan and Emergency Response Plan to the lead agency for review. Therefore, impacts would be less than significant with mitigation incorporated.

The transport use and storage of hazardous materials would be required to comply with all applicable State and federal regulations, such as requirements that spills would be cleaned immediately, and all wastes and spills control materials would be properly disposed of at approved disposal facilities. Impacts will be mitigated with the implementation of MM GEO-1 that includes the use of Best Management Practices and other requirements from the SWPPP (see Section 3.4.7 – *Geology and Soils*).

The project will require review comments by various City departments including, planning, public works, police, and fire. Project conditions of approval will ensure compliance with all applicable City policies and regulations.

MITIGATION MEASURE(S)

Implementation of MM GEO-1.

MM HAZ-1: Prior to the issuance of building permits, the project proponent shall prepare a Hazardous Materials Business Plan (HMBP) and submit it to the State CERS for approval and Kings County Public Health Services Department/Environmental Health Services Division/Hazardous Materials Section for review.

a. The Hazardous Materials Business Plan shall:

- Delineate hazardous material and hazardous waste storage areas;
- Describe proper handling, storage, transport, and disposal techniques, including which routes will be used to transport hazardous materials;
- Describe methods to be used to avoid spills and minimize impacts in the event of a spill;
- Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction;
- Establish public and agency notification procedures for spills and other emergencies including fires; and
- Include procedures to avoid or minimize dust from existing residual pesticide and herbicide use that may be present on the site.

b. The project proponent/operator shall provide the Hazardous Materials Business Plan Chemical Handling Plan and Emergency Response Plan to all contractors working on the project and shall ensure that one copy is available at the project site at all times.

c. A copy of the approved HMBP, Chemical Handling Plan and Emergency Response Plan shall be submitted to the City of Lemoore Planning and Community Development Department.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.9b -- 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?

See Impact #3.4.9a, above.

With the implementation of MM HAZ-1, which requires the approval of a HMBP, and submittal of the facility's Emergency Response Plan and mandatory staff training, the completed Project's potential to create significant hazards to the public or the environment through a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less likely. Therefore, the project impacts would be less than significant with mitigation incorporated.

MITIGATION MEASURE(S)

Implementation of MM GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.9c – Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Under CEQA, sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Schools are in a location in which sensitive receptors are present. The closest existing sensitive receptors is the existing West Hills College- Lemoore. The Lemoore University Elementary Charter and Lemoore Middle College High School are also housed on the campus, which is located 912 feet south of the project site.

As discussed in Impact #3.4.3c, the project impacts to sensitive receptors from hazardous emissions were considered less than significant. As noted in Impact #3.4.9a, with the implementation of MM HAZ-1, which requires the approval of a HMBP, and submittal of the facility's Emergency Response Plan and mandatory staff training, the completed Project's potential to create significant hazards to the public or the environment through a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less likely. Therefore, the project impacts would be less than significant with mitigation incorporated.

MITIGATION MEASURE(S)

Implementation of MM GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.9d – 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?

An online search was conducted of Cortese List to identify locations on or near the project site. The search indicated that there are no hazardous or toxic sites in the vicinity (within one mile) of the project site (Cal EPA, 2021). Currently, there are no hazardous wastes landfill sites within Lemoore (City of Lemoore, 2008).

According to EnviroStor, there are no hazardous waste and substances sites in the vicinity of the project site (CA Dept of Toxic Substances, 2021). The proposed project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would therefore not create a significant hazard to the public or the environment. Therefore, there will be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.9e – 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?

There are no public airports within two miles of the project site. The Naval Air Station Lemoore (NASL) runways are located seven miles to the west of the project site. The closest public airport is the Hanford Municipal Airport, located approximately 11 miles east of the project. The project is not within an Airport Land Use Compatibility Plan Area. There is no adopted airport land use plan that include the City of Lemoore.

The City Zoning Ordinance established an NASL overlay zone as provided in this article shall apply to those properties as designated on the zoning map, generally west of SR 41 and south of the city limits, which fall in the military influence area (MIA) (Ord. 2013-05, 2-6-2014) (City of Lemoore, 2019). The project is within the Overlay III area, which experiences aircraft noise less than 65 decibels (<65 dB CNEL). Development located within Overlay III of the NASL overlay zone are required to be constructed to attain an indoor noise level of 45 decibels (45 dB CNEL). Therefore, there will be a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.9f –Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

The 2015 Kings County Emergency Operations Plan (EOP) establishes emergency procedures and policies and identifies responsible parties for emergency response in the County and includes the incorporated City of Lemoore (Kings County, 2015). The EOP includes policies that would prevent new development from interfering with emergency response of evacuation plans. The project will comply with all local regulations related to the construction of new development that is consistent with the EOP.

The General Plan also provides guidance to City staff in the event of extraordinary emergency situation associated with natural disaster and technological incidents (City of Lemoore,

2008). The project would also comply with the appropriate local and State requirements regarding emergency response plans and access. The proposed project would not inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities. The proposed project would not interfere with the City's adopted Emergency Response Plan, therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

Impact #3.4.9g – Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The majority of the City is considered to have either little or no threat or a moderate threat of wildfire. Only one percent of the area within Lemoore city boundaries currently has a high threat of wildfire. Wildfire hazard present in the Planning Area should decrease as vacant parcels become developed (City of Lemoore, 2008).

The project site is in an unzoned area of the Kings County Fire Hazard Severity Zone Map Local Responsibility Area (LRA) (Cal Fire, 2006). However, Cal Fire has determined that portions of the City of Lemoore are categorized as a Moderate Fire Hazard Severity Zone in LRA. The project site is not located within proximity of a wildland area.

Construction and operation activities at the project site are not expected to increase the risk of wildfires. The General Plan includes policies that would protect the project and the community from fire dangers. These include the enforcement of fire codes during building construction and occupancy. In addition, developers are required to pay impact fees that offset the impact of residential development on public services such as fire protection.

The Lemoore City Fire Department located approximately three miles away, would provide fire protection services to the project. The project will comply with all applicable State and local building standards as required by local fire codes, as well as impact fees to support additional fire protection services. The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, there would be a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.10 - HYDROLOGY AND WATER QUALITY				
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality?	☐	☒	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on or offsite?	☐	☒	☐	☐
. ii. Substantially increase the rate of amount of surface runoff in a manner which would result flooding on or offsite?	☐	☒	☐	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
iv. Impede or redirect flood flows?	☐	☒	☐	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion

Impact #3.4.10a – Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction of the project would involve excavation, soil stockpiling, mass and fine grading, the installation of supporting drainage facilities, and associated infrastructure. During site grading and construction activities, large areas of bare soil could be exposed to erosive forces for long periods of time. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters.

Additionally, accidental spills or disposal of potentially harmful materials used during construction could possibly wash into and pollute surface water runoff. Materials that could potentially contaminate the construction area, or spill or leak, include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. As noted, a SWPPP for construction-related activities would include, but not be limited to, the following types of BMPs to minimize the potential for pollution related to material spills:

- Vehicles and equipment will be cleaned;
- Vehicle and equipment fueling and maintenance requirements will be established; and
- A spill containment and clean-up plan will be in place prior to and during construction activities.

The project SWPPP would include BMPs targeted at minimizing and controlling construction and post-construction runoff and erosion to the "maximum extent practicable." Mitigation Measure MM GEO-1 requires the developer to limit grading to the minimum area necessary for construction and operation of the project in order to reduce the potential for disturbed, bare soil to be washed offsite or into the existing sewer system during a rain event. Additionally, as noted in Section 3.4.9, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 which requires the approval of a HMBP, and submittal of the facility's Chemical Handling Plan, Emergency Response Plan and mandatory staff training. The HMBP contains measures and outline processes in case of accidental leakage or release of hazardous materials stored onsite. The project will also obtain a Development Agreement that will provide a review of project documentation. Conditions of approval developed by various City departments including, planning, public works, police, and fire project will ensure compliance with all applicable City policies and regulations.

In order to reduce potential impacts to water quality during construction and operation activities, Mitigation Measure MM GEO-1 would be required. With mitigation, the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, the project would have a less-than-significant impact with incorporation of mitigation.

MITIGATION MEASURE(S)

Implementation of MM GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10b – Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The project site is located within the South Fork Kings Groundwater Sustainability Agency (GSA), Basin ID No. 5-022.12 "exclusive local agency" per Water Code §10723(c). In compliance with the Sustainable Groundwater Management Act (SGMA), a Groundwater Sustainability Plan (GSP) was submitted by the GSA to the Department of Water Resources (DWR). As of May 5th, 2020, the Tulare Lake Sub-basin Annual Report has been published.

The City has adopted an Urban Water Management Plan (UWMP) in 2017 (City of Lemoore, 2017). This document is a planning tool that was created to help generally guide the actions of urban water suppliers in successfully preparing for potential water supply disruptions and issues. It provides a framework for long-term water planning and informs the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands.

The City currently utilizes local groundwater as its sole source of municipal water supply. The City's municipal water system extracts its water supply from underground aquifers via six active groundwater wells within the city limits. The City maintains four ground-level storage reservoirs within the distribution system, with a total capacity of 4.4 million gallons (City of Lemoore, 2017). The groundwater basin underlying the City is the Tulare Lake Basin as defined in the Department of Water Resources Bulletin 118 (California Department of Water Resources, 2016).

Per the City's UWMP, the City's existing system has a total supply capacity of 21,674,000 gallons per day with an average day demand of 8,769,000 gallons (City of Lemoore, 2017). The project site would obtain water from the City of Lemoore system for construction and operations and the City has indicated their ability and capacity to provide water. As the project site is currently zoned for Light Industrial development, the General Plan has adequately analyzed the water needed to meet the increased water demand. The proposed project will not substantially deplete aquifer supplies or interfere substantially with groundwater recharge or significantly alter local groundwater supplies.

The proposed project is expected to utilize an estimated maximum 4,370 gallons per day during the peak season from April to August and will not result in a substantial decrease of

groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.10c(i) – 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, in a manner that would result in substantial erosion or siltation onsite or offsite?

The rate and amount of surface runoff is determined by multiple factors, including the following: topography, the amount and intensity of precipitation, the amount of evaporation that occurs in the watershed and the amount of precipitation and water that infiltrates to the groundwater. The proposed project would alter the existing drainage pattern of the site, which would have the potential to result in erosion, siltation, or flooding on or offsite. The disturbance of soils onsite during construction could cause erosion, resulting in temporary construction impacts. In addition, the placement of permanent structures onsite could affect the long-term drainage of the site. Impacts from construction and operation are discussed below.

As discussed in Impacts #3.4.7a and #3.4.10a, above, potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary during construction. Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant after implementation of an SWPPP and BMPs required by the NPDES. No drainages or other water bodies are present on the project site, and therefore, the proposed project would not change the course of any such drainages; however, erosion may occur onsite during rain events or high winds.

The project would also connect to existing City stormwater sewer infrastructure. The project will comply with all applicable local building codes and regulations in order to minimize impacts during construction and post-construction of the project. With implementation of MM GEO-1, impacts that would result in substantial erosion or siltation on or offsite is less than significant.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10c(ii) – 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, in a manner that would result in a substantial increase of the rate or amount of surface runoff in a manner which would result in flooding on or offsite?

See also Impact #3.4.10c(i), above. The project site is flat, and grading would be minimal. The topography of the site would not change because of grading activities, and it does not contain any water features, streams or rivers. The project would develop significant areas of impervious surfaces that could significantly reduce the rate of percolation at the site or concentrate and accelerate surface runoff in comparison to the baseline condition.

The BMPs associated with the SWPPP would prevent flooding onsite or offsite. Therefore, the project would not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite. With implementation of Mitigation Measure MM GEO-1, impacts would be less than significant.

MITIGATION MEASURE(S)

Implementation of Mitigation Measures MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated*.

Impact #3.4.10c(iii) – 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 that would create or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Please see Impact #3.4.10c(i)-c(ii), above. The construction BMPs associated with the SWPPP would prevent sources of polluted runoff. Therefore, the project would not otherwise alter existing drainage patterns that cause runoff water to exceed the capacity of existing stormwater drainage systems or create polluted runoff.

Additionally, as noted in Section 3.4.9, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 requires that all hazardous wastes be identified, stored and properly managed in accordance with federal, State and local laws.

With implementation of Mitigation Measure MM GEO-1, impacts would be less than significant.

MITIGATION MEASURE(S)

Implementation of MM GEO-1 and MM HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.10c(iv) – 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 that would impede or redirect flood flows?

As discussed above in Impact #3.4.10a through c(iii), construction of the project would include soil-disturbing activities that could result in erosion and siltation, as well as the use of harmful and potentially hazardous materials required to operate vehicles and equipment. The project would be required to comply with the NPDES Construction General Permit. A SWPPP would be prepared to specify BMPs to prevent construction pollutants as required by MM GEO-1. The proposed project would not otherwise substantially degrade water quality. Therefore, with the mitigation, the project will have a less-than-significant impact.

MITIGATION MEASURE(S)

Implementation of MM GEO-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.10d – Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

A seiche is a wave generated by the periodic oscillation of a body of water whose period is a function of the resonant characteristics of the containing basin as controlled by its physical dimensions. These periods generally range from a few minutes to an hour or more. The site is not near any large bodies of water, so seiches are not considered a significant hazard at the site.

Tsunamis are waves generated in oceans from seismic activity. Due to the inland location of the site, tsunamis are not considered a hazard for the site.

Mudflows occur when soils on a slope become partially or fully liquified by the addition of significant amounts of water to the source material. Since the project site is located on relatively flat land with no nearby slopes, mudflows are not considered a hazard at the site.

Because of this the proposed project would not expose people or structures to inundation by seiche, tsunami, or mudflow.

As shown by flood maps provided by the Federal Emergency Management Agency (FEMA), the project is located within a 100-year flood zone (see Figure 3.4.10-1). The proposed project site is located within a FEMA Flood Hazard Zone labeled "Zone AO." FEMA defines "AO", as "Areas subject to inundation by one percent annual chance shallow flooding (usually

sheet flow on sloping terrain) where average depths are between one and three feet (FEMA, 2021). The project will be built to comply with appliable California Building Codes and local development standards related to floods. These codes require that certain construction in the Flood Hazard Zone be built at an elevation that locates the development out of that zone.

The City has also adopted a Storm Drain Master Plan to identify and address local flooding issues within the City by upsizing existing storm drain facilities and extending the existing drainage system upstream (City of Lemorre, 2008). Therefore, the project will not expose people or structures to risks of flooding.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.10e – Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

See Impact #3.4.10b, above.

Per the City's UWMP, the City's existing system has a total supply capacity of 21,674,000 gallons per day with an average day demand of 8,769,000 gallons (City of Lemoore, 2017). As the project site currently has land use designation of Light Industrial development, the General Plan has adequately analyzed the water needed to meet the increased water demand. The proposed project will not substantially deplete aquifer supplies or interfere substantially with groundwater recharge or significantly alter local groundwater supplies. Therefore, the project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

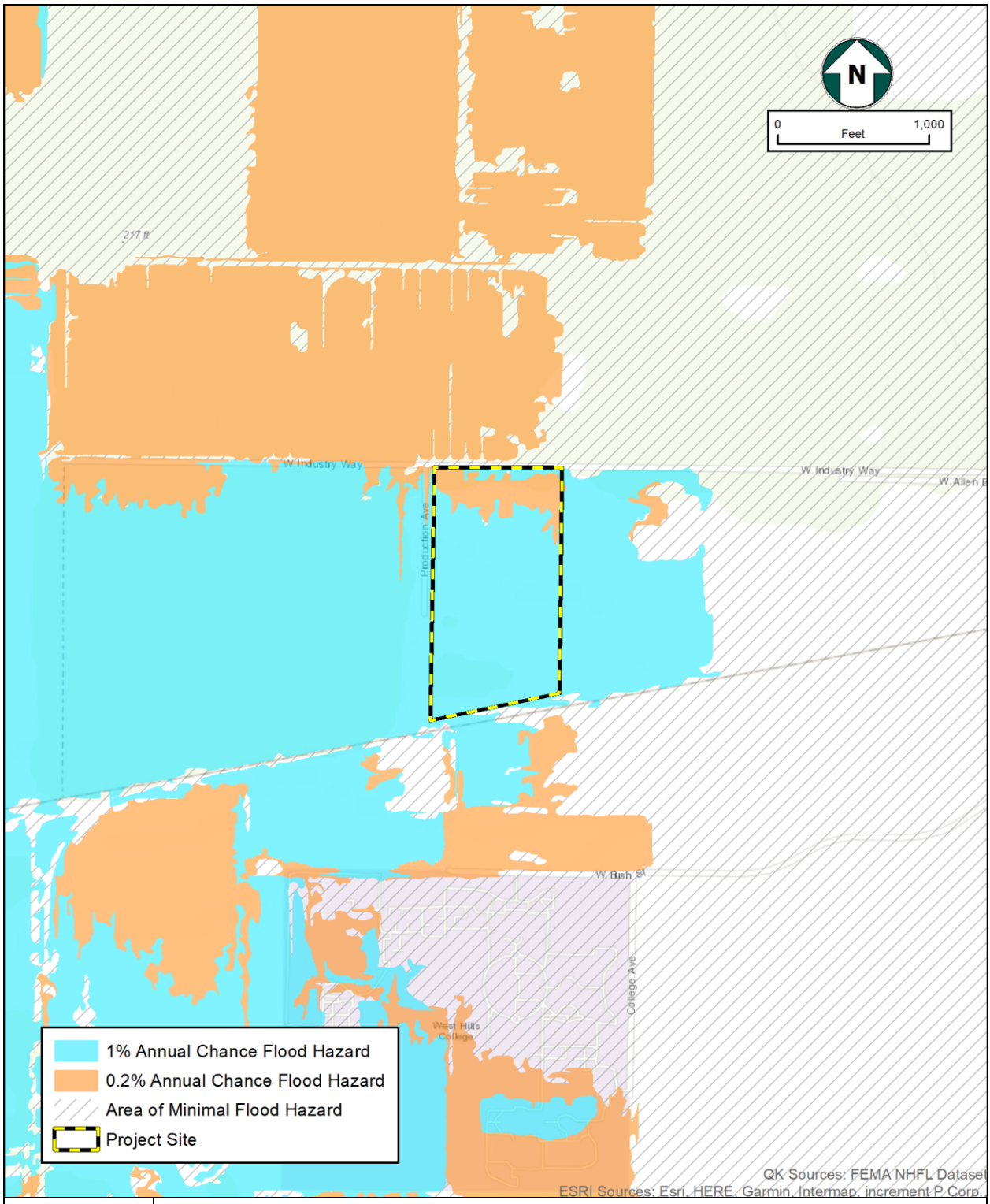

Figure 3.4.10-1
FEMA Flood Hazard Map

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.11 - LAND USE AND PLANNING

Would the project:

a.	Physically divide an established community?	☐	☐	☐	☒
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion

Impact #3.4.11a – Would the project physically divide an established community?

Active agricultural cultivation is present on the north and west of the proposed parcel. Leprino Foods owns the vacant property to the east along with a large-scale industrial facility adjoining to the east of the vacant lot. The San Joaquin Valley Railroad operates and occupies the right-of-way to the south. Therefore, the project will not physically divide an established community.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.11b – 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?

The project site has a City of Lemoore General Plan land use designation of Light Industrial and is within the ML (Light Industrial) zone district, which allows agricultural products processing (Lemoore Municipal Code 4-9-4B). Neither a General Plan Amendment or a Zone Change are required for the project, as it complies with the existing land use and zoning (Figures 3.4.11-1 and 3.4.11-2). It is the Applicant's understanding that the property south of the railroad right-of-way is planned for residential housing and prospective owners are required to sign a waiver which will prevent a land use conflict with the industrial zoning to the north. The discretionary approvals required for the project will include reviews and

comments from responsible agencies, and from several City departments to ensure compliance with all applicable, plans, policies, regulations, standards, and conditions of approval.

Therefore, the project will not conflict with any land use plan, policy, or regulation.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

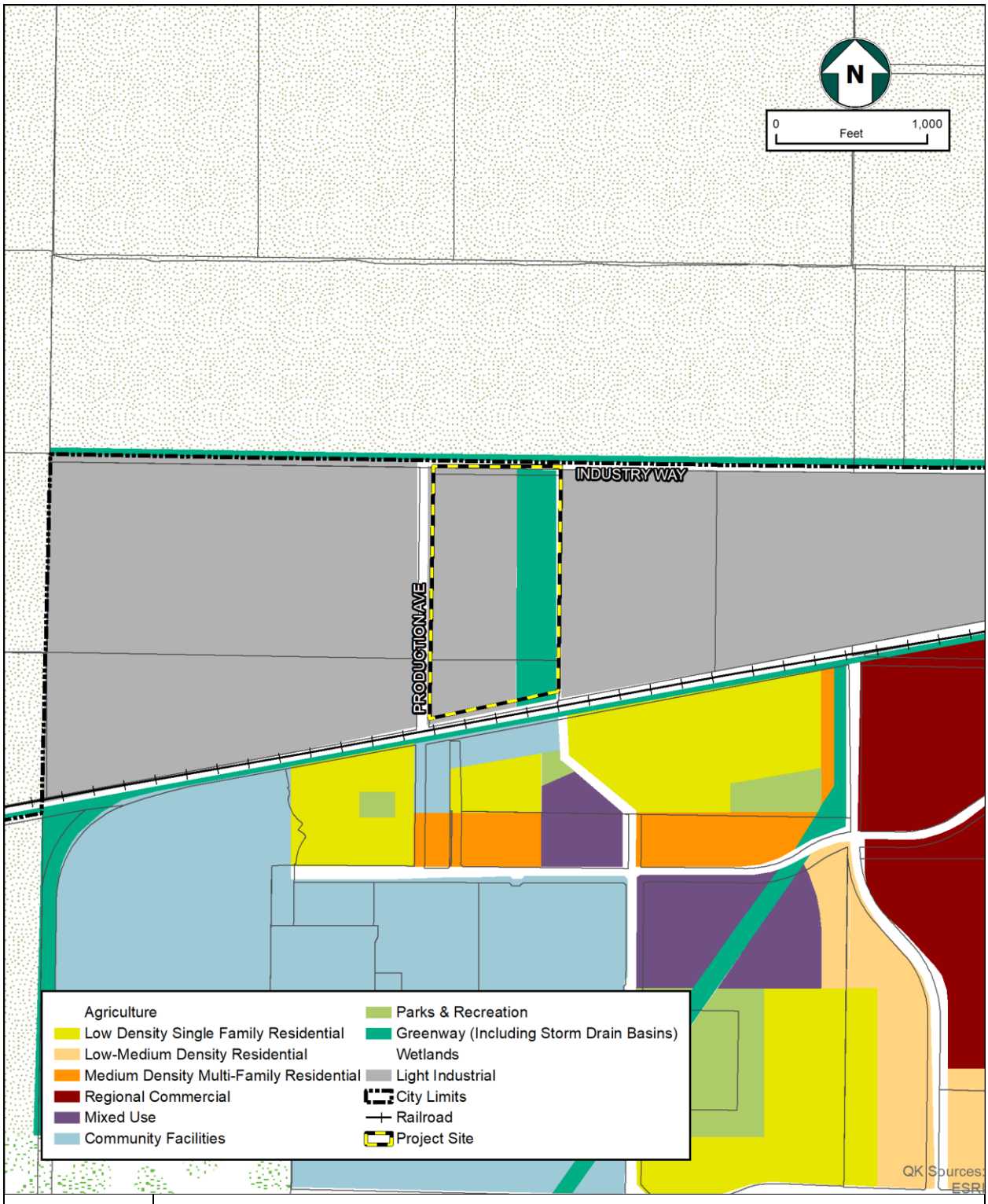

Figure 3.4.11-1
City of Lemoore General Plan Land Use

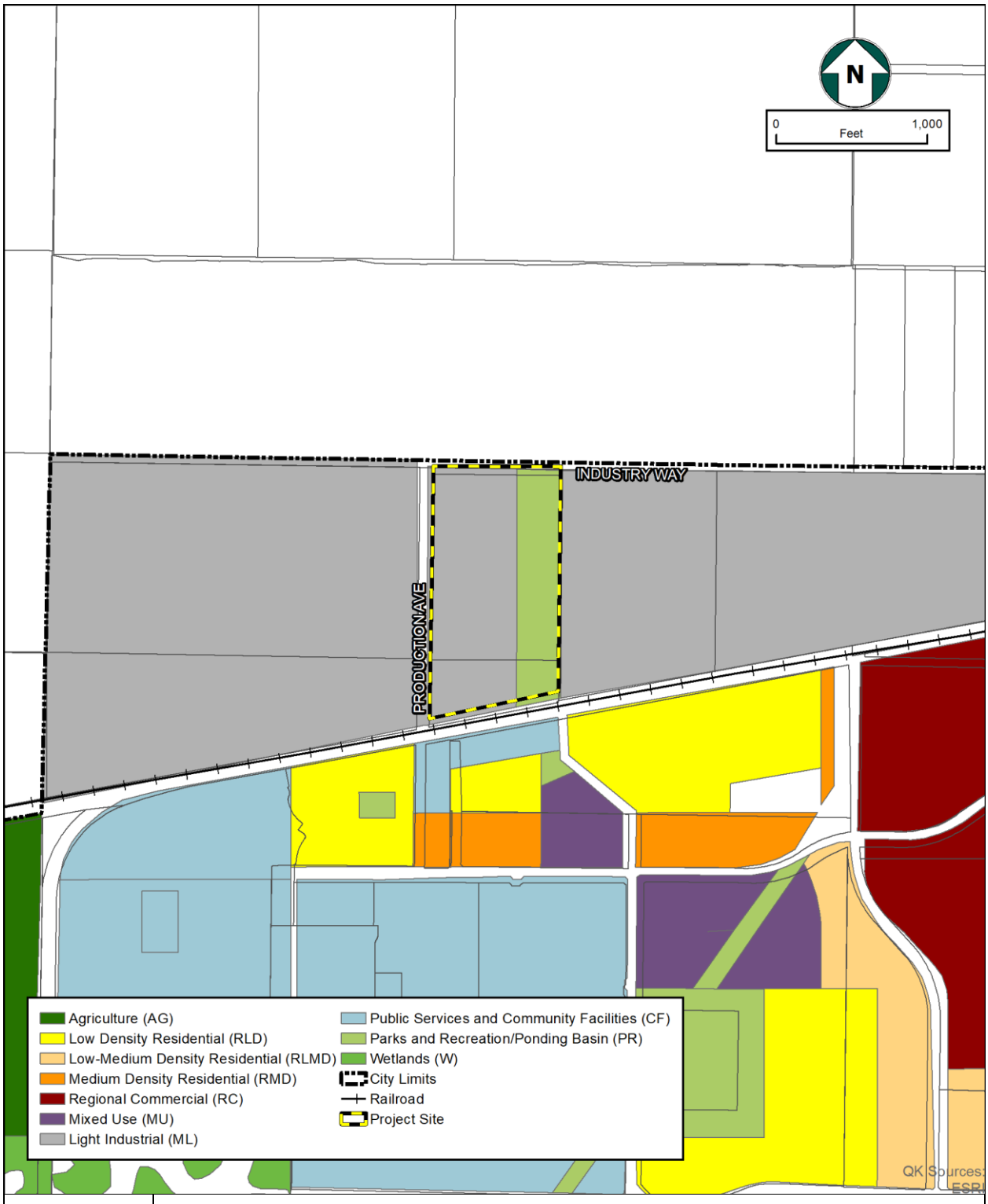

Figure 3.4.11-2
City of Lemoore Zoning

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.12 - MINERAL RESOURCES					
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion

Impact #3.4.12a – 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?

The City of Lemoore and the surrounding area have no mapped mineral resources and no regulated mine facilities (City of Lemoore, 2008). Additionally, per the California Department of Conservation - Geologic Energy Management Division (CalGEM, formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR)), there are no active, inactive, or capped oil wells located within the project site, and it is not within a CalGEM-recognized oilfield (see Figure 3.4.12-1). Therefore, there would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be ***no impact***.

Impact #3.4.12b – 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?

The project site is not designated for mineral and petroleum resources activities by the City of Lemoore General Plan (City of Lemoore, 2008). The project site and surrounding lands are zoned for Light Industrial uses. No mining occurs in the project area or in the nearby vicinity. There are no mineral extraction activities that will be conducted in the future as a result of the project. The project would not result in the loss of availability of a locally important

mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and would therefore have no impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

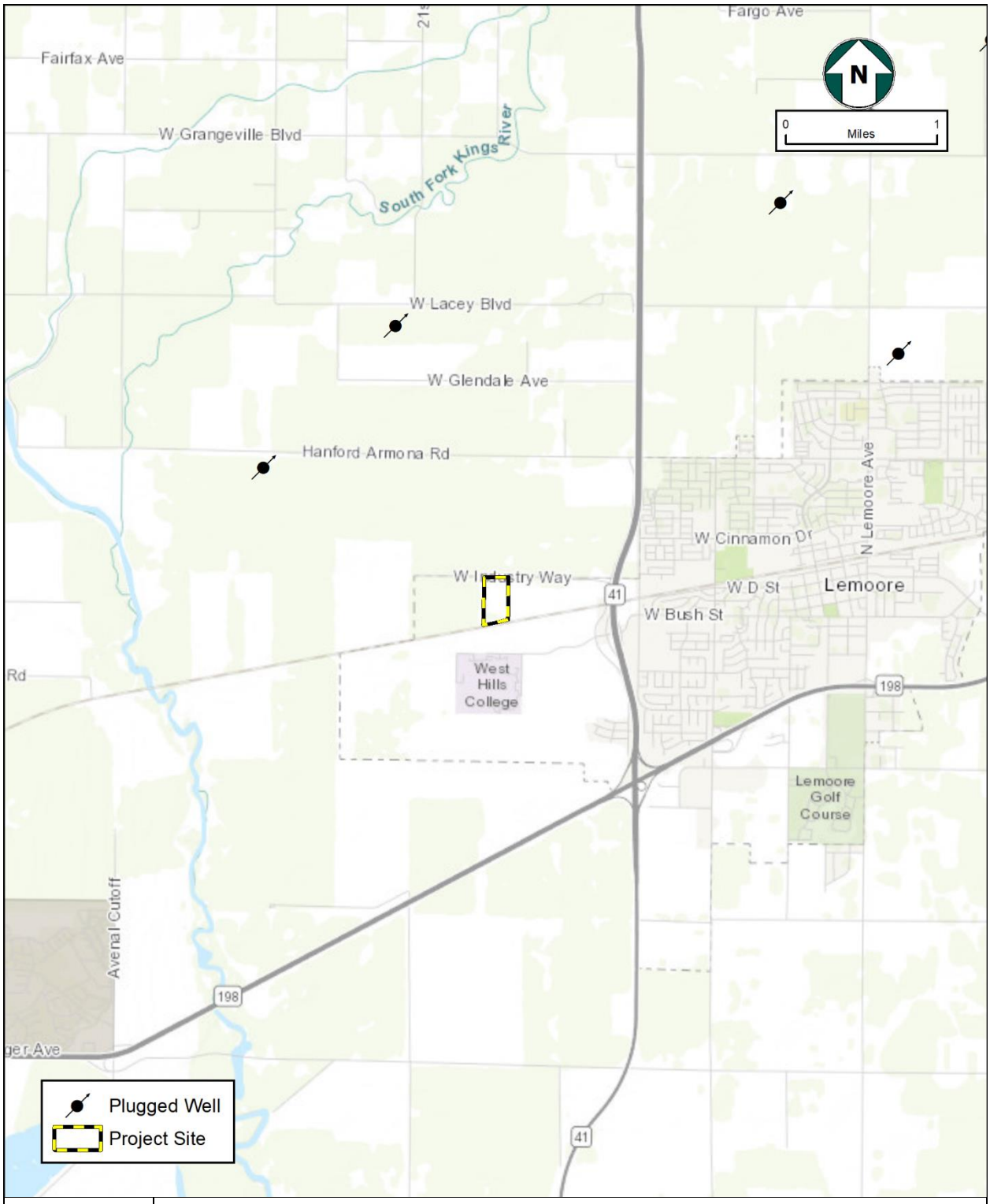

Figure 3.4.12-1
CalGEM

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.13 - NOISE				
Would the project result in:				
a. Exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of persons to or generate excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion

Impact #3.4.13a – Would the project result in exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

There are two industrial zones in Lemoore with the potential to cause noise hazards. The first is located south of Iona Avenue along both sides of 19th Avenue, and the second is located north of the San Joaquin Railroad tracks and west of SR 41. Activities carried out in both areas are primarily related to food processing and light manufacturing. At full buildout of the General Plan, more industries are expected to locate in both areas, adding to the number of noise sources.

To minimize noise impacts to surrounding residents, industrial uses are usually separated from residential areas by a road or other physical element. The amount of noise present will depend on the type of industrial activity carried out and is not expected to be as severe as noise from vehicular traffic or airplanes (City of Lemoore, 2008).

The City of Lemoore Municipal Code, Chapter 6–Noise, provides the following:

- Sec 5.6.1.B - This chapter shall be applicable to all uses and activities conducted within the City except for industrial uses and activities conducted in industrial zones.

Project construction would generate temporary increases in noise levels. Title 5, Chapter 6 of the City's Municipal Code establishes regulations and enforcement procedures for noise generated in the City (Lemoore Municipal Code 5-6-1-C.4). The project will comply with all applicable regulations related to noise. Construction-related noise levels and activities will be temporary and intermittent. Minimal equipment is expected to be used during construction of the project. Additionally, traffic and the various other noises generally associated with construction activities will be temporary and only take place during daylight hours. In addition, the construction-related noise will be intermittent and cease once the proposed construction is completed.

During regular operation activities, employees may be intermittently exposed to noise generated by trains traveling on the adjacent tracks, from onsite delivery truck traffic, and from operational equipment. Staff will be provided with the appropriate noise protection equipment as needed.

Therefore, the project would not result in the exposure of persons to or generate noise levels more than existing levels and would not exceed standards established in a local general plan or noise ordinance or applicable standards of other agencies. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.13b – Would the project result in exposure of persons to or generate excessive ground-borne vibration or ground-borne noise levels?

According to the U.S. Department of Transportation, Federal Railroad Administration, vibration is sound radiated through the ground. The rumbling sound caused by the vibration is called ground-borne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The background vibration velocity level in residential areas is usually around 50 VdB. A list of typical vibration-generating equipment is shown in Table 3.4.13-1.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.

Typical outdoor sources of perceptible ground-borne vibration are construction equipment and traffic on rough roads. For example, if a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

Table 3.4.13-1
Different Levels of Ground-borne Vibration

Vibration Velocity Level	Equipment Type
94 VdB	Vibratory roller
87 VdB	Large bulldozer
87 VdB	Caisson drilling
86 VdB	Loaded trucks
58 VdB	Small bulldozer

Source: (Federal Transit Administration , 2006)
Note: 25 feet from the corresponding equipment

Typically, ground-borne vibration generated by construction activity attenuates rapidly with distance from the source of the vibration. Therefore, vibration issues are generally confined to distances of less than 500 feet (U.S. Department of Transportation, 2005). There are no schools located within the surrounding area of the proposed project site. Potential sources of temporary vibration during construction of the proposed project would be minimal and would include transportation and use of equipment to the site.

The proposed project is expected to create temporary ground-borne vibration as a result of the construction activities (during site preparation). Construction activity would include various site preparation and site cleanup work. Construction would not involve the use of equipment that would cause high ground-borne vibration levels such as pile-driving or blasting.

Once constructed, the proposed project would not have any components that would generate high vibration levels. However, the project is near the railroad, which is a common source of ground-borne vibration and intermittent noise exposure. The General Plan FEIR states the railway does not generate noise in excess pf 80 VdB, which is the FTA standard (City of Wasco, 2016). Thus, the proposed Project would not result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. Thus, construction and operation of the proposed project would not result in any vibration and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.13c – 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?

There are no public airports within two miles of the project site. The Naval Air Station Lemoore (NASL) runways are located seven miles to the west of the project site. The closest public airport is the Hanford Municipal Airport, located approximately 11 miles east of the project. The project is not within an airport land use compatibility plan area. There is no adopted airport land use plan that includes the City of Lemoore.

The City Zoning Ordinance established an NASL overlay zone as provided in this article shall apply to those properties as designated on the zoning map, generally west of State Route 41 and south of the city limits, which fall in the military influence area (MIA) (Ord. 2013-05, 2-6-2014) (City of Lemoore, 2019). The project is within the Overlay III area, which experiences aircraft noise less than 65 decibels (<65 dB CNEL). Development located within Overlay III of the NASL overlay zone are required to be constructed to attain an indoor noise level of 45 decibels (45 dB CNEL). Therefore, there will be a less-than-significant impact.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less- than Significant Impact	No Impact
3.4.14 - POPULATION AND HOUSING				
Would the project:				
a. Induce substantial 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)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

Impact #3.4.14a – Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project does not include construction of new dwelling units and would not induce population growth in the area. It is assumed that the majority of the employees at the proposed facility would include the existing workforce, who generally live in the area. Any potential for population growth, due to the employment opportunities associated with the project, is not substantial relative to the total population of the City of Lemoore. According to the California Department of Finance estimate, the City's population was 26,257 in 2019. The City anticipates a 3.1 percent annual increase in population, with an estimated population of 34,719 in 2025 and 47,115 by 2035 (City of Lemoore, 2017). All onsite improvements will be completed in compliance with applicable General Plan and Municipal Code requirements. The Lemoore General Plan includes policies to limit development only to areas inside an urban boundary around the city. Any growth inducement could only occur on lands that are designated and have been evaluated for urban development. Therefore, any population growth resulting from the proposed project will be minimal and result in less-than-significant impacts.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.14b – Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed project would not require demolition of any housing, as the project site is currently undeveloped land zoned for Light Industrial uses. Therefore, there would be no need to construct replacement housing elsewhere. There would be no impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact

3.4.15 - PUBLIC SERVICES

Would the project:

a.	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 to other performance objectives for any of the public services:				
	i. Fire protection?	☐	☐	☒	☐
	ii. Police protection?	☐	☐	☒	☐
	iii. Schools?	☐	☐	☒	☐
	iv. Parks?	☐	☐	☒	☐
	v. Other public facilities?	☐	☐	☒	☐

Discussion

Impact #3.4.15a(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 to other performance objectives for any of the public services – fire protection?

The Lemoore Volunteer Fire Department (LVFD) has operated as an all-volunteer department since 1921. The LVFD includes one Chief, two Assistant Chiefs, four Crew Captains, seven Engineers, 11 Emergency Medical Technicians, one paid full-time Administrative Assistant, and one paid full-time maintenance worker. The department covers an area of approximately nine square miles, with Mutual Aid Agreements with Kings County Fire, Hanford City Fire, and Naval Air Station Lemoore.

Table 3.4.15-1
Fire Service Existing and Future Demand

	Existing (2006)	Demand Buildout (2030)
Staffing	35 volunteers	72 volunteers
Facilities	2	3

(City of Lemoore, 2008)

Construction and operation of the proposed project would not be expected to result in an increase in demand of fire protection services leading to the construction of new or physically altered facilities. Fire suppression support is provided by the City of Lemoore Volunteer Fire Department (LVFD), which has two fire stations and the closest station to the project site is located at 210 Fox Street, approximately two miles east of the project site.

The project site plan is approximately 31 acres in area and includes a fertilizer manufacturing facility. The project does not include new dwelling units and would not induce population growth in the area. Therefore, the project will not result in significant environmental impacts related to acceptable service ratios, response times, or to other performance objectives fire protection services.

The City of Lemoore will ensure that construction activities would be in accordance with local and State fire codes. Fire protection services are adequately planned for within the City's General Plan through policies to ensure the City maintains Fire Department performance and response standards by allocating the appropriate resources. The project developer is responsible for constructing any infrastructure needed to serve the project as required by the City fire code, such as a sprinkler system, smoke detection devices and fire suppression equipment (e.g., fire extinguishers, etc.), and pay the appropriate impact fees, which would reduce impacts to fire protection to less-than-significant levels.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.15a(ii) – 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 to other performance objectives for any of the public services – police protection?

The Police Department has a staff of 31 sworn peace officers and seven civilian staff members. There are 30 vehicles assigned to the department.

The Police Department currently operates at a ratio of 1.33 officers per thousand residents, which is lower than the Western U.S. average of 1.5 officers per one thousand residents reported by the Federal Bureau of Investigation. Response times and the ability of the Police Department to provide acceptable levels of service are contingent on increasing staffing levels, sworn and civilian, consistent with resident population increase and the population of visitors, merchants, schools, and shoppers with the department's service area.

Table 3.4.15-2
Police Service Existing and Future Demand

	Existing (2006)	Demand Buildout (2030)
Sworn Officers	31	64
Population	23,390	48,250

(City of Lemoore, 2008)

The City's police station is located at 657 Fox Street, approximately two miles northeast of the project site.

The project will not increase the local population or add additional streets into the police patrol network and will not result in significant environmental impacts related to acceptable service ratios, response times, or to other performance objectives police protection services.

To ensure that there will be no impacts to public protection services, the project developer is required to pay appropriate impact fees related to police protection and is responsible for constructing any infrastructure needed to serve the project. Therefore, impacts on police protection services would therefore be considered less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.15a(iii) – 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 to other performance objectives for any of the public services – schools?

See Impact #3.4.14a, above.

Buildout of the General Plan will result in the addition of 8,020 households (single-family and multi-family), with an additional population of approximately 24,860. Student generation factors by household type shown in Table 3.4.15-3 are used to calculate future enrollment. School size assumptions for households in the Planning Area are as follows:

- K–6: 750 students per school
- 6–8: 800 students per school
- 9–12: 1800 students per school

Table 3.4.15-3
Student Generation Factors

Household Type		
Type	**Single Family**	**Multi-family**
Elementary School (K-6)	0.354	0.320
Middle School (7-8)	0.088	0.070
High School (9-12)	0.183	0.117
Total	**0.625**	**0.507**

Source: (Lemoore Union High School District, 2021).

Government Code Section 65996 requires statutory developer fees as the exclusive means of considering and mitigating impacts on school facilities. The developer will pay appropriate impact fees at the time building permits are issued. Therefore, the impact would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.15a(iv) – 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 to other performance objectives for any of the public services – parks?

See Impacts #3.4.14a-b. The project does not include new dwelling units and would not induce population growth in the area. The project will be reviewed and approved in compliance with the goals, policies, and implementation measures of the General Plan and Lemoore City Municipal Code Title 9, Chapter 7, Article N. Therefore, the project would have a less-than-significant impact to the City park system.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.15a(v) – 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 to other performance objectives for any of the public services – other public facilities?

The proposed project does not include any impacts to other public facilities such as libraries, hospitals or emergency medical facilities. The proposed project would comply with the goals, policies, and implementation measures of the General Plan. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.16 - RECREATION				
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion

Impact #3.4.16a – 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?

See Impact #3.4.14a-b. and #3.4.15a(iv)-(v). As noted previously, the project does not include construction of new dwelling units and would not induce population growth in the area. The project will comply with the goals, policies, and implementation measures of the General Plan and Lemoore City Municipal Code Title 9, Chapter 7, Article N. Therefore, the project would not increase the use of existing parks or the need to construct or expand existing recreational facilities.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.16b – Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

See Impact #3.4.15a(iv)-(v). The project does not require the construction of any new homes or require construction of new recreational facilities. Therefore, it would not generate an

adverse physical effect on the environment. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.17 - TRANSPORTATION AND TRAFFIC					
Would the project:					
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?	☐	☐	☒	☐

Discussion

Analysis of project traffic impacts were provided by the Traffic Investigation, which can be found in Appendix C. (Ruettgers & Schuler, 2021).

Impact #3.4.17a – Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project proposes to construct and operate a facility that includes the storage, blending and sale of bulk and prepackaged dry and liquid fertilizer along with the storage of agricultural protection products.

Operational Hours are Monday to Friday 6:30 a.m. to 5:00 p.m. and Saturday 6:30 a.m. to 12:00 p.m.. Helena employs approximately 22 employees throughout the year. The rail access to the site will offset four truckloads of product for each rail car that delivers to the site.

Transit

The Kings Area Rural Transit (KART) operates two transit routes in the study area. Route 12, KART Transit Center to Skyline and Union, has stops at Bush and Belle Haven and West Hills College (WHC). The route operates Monday through Friday with three morning starting

around 8:10 a.m. and two evening stops until 5:00 p.m. Route 20, KART Transit Center to WHC, likewise has stops at Bush and Belle Haven and WHC. This route operates Monday through Friday from approximately 6:10 a.m. to 10:40 a.m. with 30-minute headways.

Bike

The project site and surrounding area is zoned for Light Industrial uses. The General Plan does not include bike lanes in the project area. The closest bike lane is located along Bush Street, north of SR 198. According to the 2011 Kings County Regional Bicycle Plan, there is a proposed extension of the bike path on Bush Street to better serve the West Hills College (Kings County Association of Governments, 2011).

Roadways

The City of Lemoore General Plan states that most traffic studies are to use a LOS "D" as their standard for traffic impact analysis purposes. Caltrans endeavors are to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities (City of Lemoore, 2008).

The Circulation Element of the General Plan contains design objectives for street standards are as follows:

- To provide guidance for a system of public streets that will meet the City's needs;
- To ensure that streets will fulfill their intended functions, consistent with the General Plan, and support multiple modes of travel;
- To provide adequate traffic-carrying capacity, while minimizing width, to create strong neighborhood character; and
- To create a system of sidewalks and bikeways which promote safe walking and bicycle riding for transportation and recreation.

As shown in Table 3.4.17-1, Bush Street and SR 41 southbound ramps currently operates below an acceptable level of service. Additionally, by 2024, Bush Street and Semas Drive is anticipated to operate below an acceptable level of service. In 2040, Bush Street and Belle Haven Drive and Bush Street and SR 41 northbound ramps are anticipated to operate below an acceptable level of service. All other intersections within the area are anticipated to operate at an acceptable level of service (Ruettgers & Schuler, 2020). There are two approved residential subdivisions and the West Hills Community College Lemoore campus, in close proximity to the proposed project. When the residential development projects and expansion of the Community College begin construction the necessary improvements to these intersections will be completed. Completion of these road improvements are anticipated to operate at acceptable levels of service, and will reduce traffic impacts to less-than-significant levels.

Table 3.4.17-1
Traffic Conditions Analysis

Street	2020 Directional LOS		2024 Directional LOS		2040 Directional LOS	
	East AM/PM	West AM/PM	East AM/PM	West AM/PM	East AM/PM	West AM/PM
Bush St: College Ave to Semas Dr	A/B	C/B	B/B	B/B	C/C	C/C
Bush St: Semas Dr to Belle Haven Dr	B/B	B/B	B/B	B/B	C/B	C/B
Bush St: Belle Haven Dr to SR 41 SB	B/B	B/B	B/B	B/B	C/B	C/B
Bush St: SR 41 SB to SR 41 NB	A/A	A/A	A/A	A/A	A/A	B/A
Bush St: SR 41 NB to N 19 ½ Ave	A/A	A/A	A/A	A/A	A/A	B/A

Source: (Ruettgers & Schuler, 2020)

Trip Generation

Estimates of average daily traffic (ADT) volumes generated by the proposed project are presented below. The project is a specialized use and does not fall into any of the categories listed in the ITE Trip Generation Manual. Therefore, project trip generation was calculated based on detailed employment and delivery information supplied by the developer (Ruettgers & Schuler, 2021).

It is anticipated that the facility will employ approximately 22 employees during weekday operations and approximately 16 on Saturday. In addition, there will be approximately 35 heavy truck deliveries on weekdays and 26 on Saturday.

Table 3.4.17-2 shows project trip generation during Monday through Friday operations and Table 3.4.17-3 shows project trip generation for Saturday activities. Peak hour trips assumed that all employees would arrive and depart during the morning and evening project peak hours, respectively. Heavy truck trips were assumed to be spread throughout the workday.

Table 3.4.17-2
Project Trip Generation (Weekday)

General Information Traffic Type	Weekday Daily Trips		Weekday AM Peak Hour Trips		Weekday PM Peak Hour Trips	
	Variable	ADT	In % Split/Trips	Out % Split/ Trips	In % Split/Trips	Out % Split/ Trips
Employees	22	68	22	2	2	22
Heavy Duty Trucks	35	70	4	4	4	4
Total Trips		138	26	6	6	26

Table 3.4.17-3
Project Trip Generation (Saturday)

General Information Traffic Type	Weekday Daily Trips		Weekday AM Peak Hour Trips		Weekday PM Peak Hour Trips	
	Variable	ADT	In % Split/Trips	Out % Split/ Trips	In % Split/Trips	Out % Split/ Trips
Employees	16	50	16	2	2	16
Heavy Duty Trucks	26	52	3	3	3	3
Total Trips		102	19	4	4	19

The project trip distribution represents the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers (employees) and transportation facilities to potential delivery locations (heavy trucks).

The City of Lemoore utilizes the Caltrans "Guide for the Preparation of Traffic Impact Studies," dated December 2002, as the guideline for determining the threshold condition for requiring an analysis of traffic impacts. The guide indicates that the minimum condition for requiring a traffic analysis is the addition of 50 project trips to one or more intersections during the peak hour of adjacent street traffic. The peak hour of adjacent street traffic typically occurs on a weekday during the AM or PM peak hour for commuter traffic.

The peak hour volume is less than 50 trips at the intersection of West Industrial Way and Belle Haven Drive. Therefore, being below the threshold to require analysis, no significant traffic impacts are anticipated due to trips attributable to the project.

Vehicle Miles Traveled (VMT) Evaluation

The new CEQA Guidelines Section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas and shifts the focus driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

An evaluation of VMT was conducted based on applicable CEQA guidelines. The evaluation involved reviewing VMT attributable to the proposed project and assessing whether such "project VMT" would result in a significant transportation impact.

Guidelines for assessing VMT as part of a transportation impact analysis under CEQA are contained in the State of California, Office of Planning and Research's "Technical Advisory on Evaluating Transportation Impacts in CEQA," dated December 2018. This advisory includes

methodology recommendations for analyzing project VMT, including the following regarding vehicle type.

> **Vehicle Types.** Proposed (CEQA Guideline) Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks.

The proposed project would result in an increase in both heavy truck trips and passenger vehicle trips (employees). Based on the excerpt above, only the passenger vehicle trips would be subject to VMT analysis under CEQA. One such threshold pertains to project size. According to the Advisory, a project that generates fewer than 110 trips per day may be assumed not to cause a significant transportation impact.

As shown in Tables 3.4.17-2 and 3.4.17-3, the number of daily passenger vehicle (employee) trips generated by the project during the week (68) and on Saturday (50) satisfy the small project screening threshold (Ruettgers & Schuler, 2021). Therefore, the project is anticipated to have a less-than-significant impact.

MITIGATION MEASURE(S)

Mitigation is not required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.17b – Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Please see Impact #3.4.17a, above.

Impacts will be less than significant.

MITIGATION MEASURE(S)

Mitigation is not required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.17c – 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 will be designed to current standards and safety regulations and will be constructed as to comply with the City and Caltrans regulations, and design and safety

standards of Chapter 33 of the California Building Codes (CBC) and the guidelines of Title 24 in order to create safe and accessible roadways.

Vehicles exiting the site will be provided with a clear view of the roadway without obstructions. Specific design features will incorporate all applicable safety measures to ensure that inadequate emergency access to the site or other areas surrounding the project area would not occur. Therefore, with the incorporated design features and all applicable rules and regulations, the project will have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.17d – Would the project result in inadequate emergency access?

See the discussion in Impact #3.4.9f.

State and City fire codes establish standards by which emergency access may be determined. The proposed project would have to provide adequate unobstructed space for fire trucks to turn around. The proposed project site would have adequate internal circulation capacity including entrance and exit routes to provide adequate unobstructed space for fire trucks and other emergency vehicles to gain access and to turn around.

The proposed project would not inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities. The proposed project would not interfere with the City's adopted Emergency Response Plan. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.18 - TRIBAL CULTURAL RESOURCES				
Would the project:				
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Discussion

Impact #3.4.18a(i) – 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)?

Please see Impacts #3.4.5a, #3.4.5b, and #3.4.5d.

No archaeological resources were identified during the Phase I Cultural Resource Survey (Hudlow Cultural Resource Associates, 2021). A SLF request to the NAHC was submitted for the project. A response from the NAHC with negative results was received on March 2, 2021 (see Appendix B).

On January 13, 2021, the City of Lemoore Community Development Department, acting as the CEQA Lead Agency, informed the Santa Rosa Rancheria Tachi Yokut Tribe (Tribe) in writing and by email of the project and its location. An email response was received the same date. The Tribe has concerns about this project's potential to adversely affect tribal resources and they would like to continue consultation on potential mitigation measures. Responses received will be incorporated as mitigation measures.

The Santa Rosa Rancheria Tachi Yokut Tribe will be consulted prior to project approval and Mitigation Measures MM CUL-1 through CUL-4 will be implemented to reduce potential impacts to historical or archaeological resources. Therefore, the project will have a less-than-significant impact.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

With implementation of Mitigation Measures MM CUL-1 through MM CUL-4, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources.

MITIGATION MEASURE(S)

Implement MM CUL-1 through MM CUL-4.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated.*

Impact #3.15.17a(ii) - 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?

Please see Impacts #3.4.5a, #3.4.5b, and #3.4.5d, above.

With implementation of Mitigation Measures MM CUL-1 through MM CUL-4, the project would not cause a substantial adverse change in the significance of a tribal cultural resource 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.

MITIGATION MEASURE(S)

Implement MM CUL-1 through MM CUL-4.

LEVEL OF SIGNIFICANCE

Impact would be *less than significant with mitigation incorporated*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.19 - UTILITIES AND SERVICE SYSTEMS				
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion:

Impact #3.4.19a – Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project would be constructed on land that has already been designated for industrial development by the General Plan. The City has indicated that the infrastructure necessary to serve the project is available and sufficient. Therefore, no additional sewer capacity would be required for the proposed project. Impacts are considered less than significant.

The City of Lemoore belongs to the San Joaquin Valley Power Authority, which was formed in November 2006, to develop and conduct electricity-related programs for the region. The San Joaquin Valley Power Authority is the governing body authorized by Community Choice, created by the California legislature in 2002, to provide an opportunity for local government (cities, counties or combinations of cities and counties) to purchase electricity on behalf of their residents and businesses. Community Choice is only for the purchase of electricity. The delivery, metering, billing, operation and maintenance of wires and poles remains the responsibility of PG&E within Lemoore (City of Lemoore, 2008).

There are existing transmission facilities adequate to meet present and projected demand in the community. The project will connect to the existing transmission lines for electrical power. Telecommunication requirements for the project are typical of this type of land use and would not require any expansion or construction of new telecommunication facilities.

The proposed project would not require or result in the construction or expansion of existing of new water, wastewater treatment, electrical or telecommunications facilities. Therefore, the project would have a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.19b – Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As noted in Impact #3.4.10b, the Tulare Lake Subbasin total storage capacity is estimated to be 17,100,000 acre-feet to a depth of 300 feet, and 82,500,000 acre-feet to the base of fresh groundwater. According to the 2015 Urban Water Management Plan, the City's 2015 maximum day demand is approximately 12.8 mgd. It is anticipated that the City has sufficient water available to supply the project.

The project will connect to the existing water supply system. The usage of water would be consistent with the City's current demands. As noted previously, the project will comply with City Municipal Codes related to water conservation, such as xeriscape landscaping, drip irrigation, low flow toilets, water efficient appliances, etc. The proposed increase in water usage at the project site is not anticipated to require the construction of new water facilities or the expansion of existing facilities. Impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.19c – Would the project result in a determination by the wastewater treatment provider that 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?

Municipal Code Chapter 4, Section 8-4-1 notes that the development of land for urban uses substantially accelerates the concentration of surface and stormwaters. The City has established drainage fees to defray all or a part of the actual or the estimated cost of constructing planned drainage facilities for the removal of surface and stormwaters from drainage areas. The project will be reviewed by the Department of Public Works and any applicable drainage fees will be determined. The payment of the fees would help reduce impacts of the project related to wastewater treatment.

The generation of wastewater and water would be consistent with the City requirements. The proposed increase in water and wastewater usage at the project site is not anticipated to require the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

The site engineering and design plans for the proposed project would be required to implement BMPs, comply with requirements of the City Building and development standards. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant.*

Impact #3.4.19d – Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Implementation of the proposed project would result in the generation of solid waste on the site, which would increase the demand for solid waste disposal. During construction these materials, which are not anticipated to contain hazardous materials, would be collected and transported away from the site to an appropriate disposal facility.

Solid waste disposal for Lemoore is managed by Kings Waste and Recycling Authority (KWRA). The City's Refuse Division is responsible for solid waste collection services. The majority of the City's solid waste is taken to the Kettleman Hills nonhazardous landfill facility, owned by Chemical Waste Management (CWMI). The facility is located south of Lemoore and has an available capacity of 15.6 million cubic yards as of 2020 (Cal Recycle ,

2020). KWRA is currently studying the future needs of solid waste services including building a new landfill to be operated by CWMI near the existing site. The County has a 25-year contract with CWMI to handle its solid waste until 2023 (City of Lemoore, 2008). The disposal of oil or other hazardous or non-hazardous materials would be transported to an approved Class I hazardous waste disposal facility or a Class II non-hazardous waste disposal facility.

The project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, therefore there would be a less-than-significant impact. There is sufficient capacity at the local landfill to accommodate project-related waste. Therefore, project impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant.***

Impact #3.4.19e – Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

The 1989 California Integrated Waste Management Act (AB 939) requires Kings County to attain specific waste diversion goals. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the proposed project design. Reuse and recycling of construction debris would reduce operating expenses and save valuable landfill space.

The project is subject to the solid disposal ordinance of the City of Lemoore as well as the rules of the contracted waste franchise. The project is also subject to Title 4–Chapter 1 of the Lemoore Municipal Code that regulates all solid waste activities from disposal, sorting, and recycling of materials. The Lemoore Public Works–Refuse Department would provide refuse, recycling and green waste collection services. Refuse service fees have been established and would be charged by the City when services are requested.

The proposed project would not be expected to significantly impact Lemoore or Kings County landfills. The proposed project would be required to comply with all federal, State, and local statues and regulations related to solid waste. Therefore, implementation of the proposed project would result in a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant.***

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.20 - WILDFIRE				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Discussion:

Impact #3.4.20a – Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The 2015 Kings County Emergency Operations Plan (EOP) establishes emergency procedures and policies and identifies responsible parties for emergency response in the County and includes the incorporated City of Lemoore (Kings County, 2015). The EOP includes policies that would prevent new development from interfering with emergency response of evacuation plans. The project will comply with all local regulations related to the construction of new development that is consistent with the EOP.

The General Plan also provides guidance to City staff in the event of extraordinary emergency situation associated with natural disaster and technological incidents (City of Lemoore, 2008). The project would also comply with the appropriate local and State requirements regarding emergency response plans and access. The proposed project would not inhibit the

ability of local roadways to continue to accommodate emergency response and evacuation activities or interfere with the City's adopted Emergency Response Plan, therefore, there would be a less-than-significant impact.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.20b – Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire?

Wildfire hazard data for the Lemoore Planning Area is provided by the California Department of Forestry and Fire Protection, as summarized in Table 3.4.20-1. The majority of the City is considered to have either little or no threat or a moderate threat of wildfire. Only one percent of the Planning Area currently has a high threat of wildfire (California Department of Forestry and Fire Protection, 2021). Wildfire hazard present in the Planning Area should decrease as vacant parcels become developed.

Table 3.4.20-1
Existing Wildfire Hazards

Fire Hazards	Acreage	Percent of City Area
Little or No Threat	5,648	46
Moderate	6,494	53
High	85	1
Very High	0	0
Total	**12,227**	**100**

There are no other factors of the project or the surrounding area that would exacerbate wildfire risks, and thereby expose project occupants to pollutant concentration from a wildfire or the uncontrolled spread of a wildfire. Therefore, impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.20c – Would the project, require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines?

See Impacts #3.4.20a and b, above.

The project may require the installation or maintenance of additional distribution lines to connect the structures to the existing utility grid. However, the project would be constructed in accordance with all local and State regulations regarding power lines and other related infrastructure, as well as fire suppression requirements. Therefore, the project would not exacerbate fire risk or result in temporary or ongoing impacts to the environment and impacts would be less than significant.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Impact #3.4.20d – 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?

The project site is not located near the ocean or a steep topographic feature (i.e., mountain, hill, bluff, etc.). Additionally, there is no body of water within the vicinity of the project site.

As shown by flood maps provided by the Federal Emergency Management Agency (FEMA), the project is located within a 100-year flood zone (see Figure 3.4.10-1). The proposed project site is located within a FEMA Flood Hazard Zone labeled "Zone AO," which is subject to inundation by one percent annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet (FEMA, 2021). The development will be built to comply with California Building Codes. These codes require that certain construction in the Flood Hazard Zone be built at an elevation which locates the development out of that zone.

The City has also adopted a Storm Drain Master Plan to identify and address local flooding issues within the City by upsizing existing storm drain facilities and extending the existing drainage system upstream (City of Lemorre, 2008). Therefore, the project will not expose people or structures to risks of flooding, landslides, runoff, slope instability, or drainage changes.

MITIGATION MEASURE(S)

No mitigation is required.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
3.4.21 - MANDATORY FINDINGS OF SIGNIFICANCE					
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c.	Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

Impact #3.4.21a – Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As evaluated in this IS/MND, the proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of

potential impacts. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share a similar cultural paleontological and biological resources. Consequently, the incremental effects of the proposed project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the project would have a less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implement MM BIO-1 through BIO-8, CUL-1 through CUL-4, GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.21b - Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the impact analyses in Sections 3.4.1 through 3.4.20 of this IS/MND, any potentially significant impacts of the proposed project would be reduced to a less-than-significant level following incorporation of the mitigation measures. All planned projects in the vicinity of the proposed project would be subject to review in separate environmental documents and required to conform to the City of Lemoore General Plan, zoning, mitigate for project-specific impacts, and provide appropriate engineering to ensure the development meets all applicable federal, State and local regulations and codes. As currently designed, and with compliance of the recommended mitigation measures, the proposed project would not contribute to a cumulative impact. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

MITIGATION MEASURE(S)

Implement MM BIO-1 through BIO-8, CUL-1 through CUL-4, GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with mitigation incorporated.*

Impact #3.4.21c - Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

All the project's impacts, both direct and indirect, that are attributable to the project were identified and mitigated to a less-than-significant level. All planned projects in the vicinity of the proposed project would be subject to review in separate environmental documents and required to conform to State regulations, the City of Lemoore General Plan, Zoning Ordinance, and Municipal Codes to mitigate for project-specific impacts. The project will have the appropriate engineering to ensure the development meets all applicable federal,

State and local regulations and codes. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable. Therefore, the proposed project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct impacts of the proposed project are identified as having no impact, less-than-significant impact, or less-than-significant impact with mitigation incorporated.

MITIGATION MEASURE(S)

Implement MM BIO-1 through BIO-8, CUL-1 through CUL-4, GEO-1 and HAZ-1.

LEVEL OF SIGNIFICANCE

Impacts would be ***less than significant with mitigation incorporated***.

SECTION 4 - REFERENCES

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APPENDIX A

AIR QUALITY, GREENHOUSE GAS, AND ENERGY IMPACT ASSESSMENT

Stantec

Air Quality, Greenhouse Gas, and Energy Impact Assessment

Helena Agri-Enterprises Facility
Lemoore Major Site Plan Review

February 26, 2021

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Abbreviations

$\mu g/m^3$	Micrograms Per Cubic Meter
AB	Assembly Bill
ACBMs	Asbestos-Containing Building Materials
ATCMs	Airborne Toxic Control Measures
AQGGP	Air Quality Guidelines for General Plans
AQI	Air Quality Index
AQP	Air Quality Plan
BACT	Best Available Control Technology
BAAQMD	Bay Area Air Quality Management District
BAU	Business-As-Usual
BPS	Best Performance Standards
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CF_4	Perfluoromethane
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
C_2F_6	Perfluoroethane
C_3F_8	Perfluoropropane
C_4F_{10}	Perfluorobutane
C_4F_8	Perfluorocyclobutane
C_5F_{12}	Perfluoropentane
C_6F_{14}	Perfluorohexane
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
EO	Executive Order
EPA	United States Environmental Protection Agency
FCAA	Federal Clean Air Act

GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gases
GWP	Global Warming Potential
HAP	Hazardous Air Pollutants
HFC	Hydrofluorocarbons
H_2S	Hydrogen Sulfide
LCFS	Low Carbon Fuel Standard
LOS	Level of Service
MMBTU	Million British Thermal Units
MMT	Million Metric Tons
$MMTCO_2e$	Million Metric Tons of Carbon Dioxide Equivalents
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF_3	Nitrogen Trifluoride
N_2O	Nitrous Oxide
NOA	Naturally Occurring Asbestos
NO_X	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_3	Ozone
OAL	Office of Administrative Law
Pb	Lead
PEIR	Program Environmental Impact Report
PERP	Portable Equipment Registration Program
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
$PM_{2.5}$	Fine particulate matter; particulate matter 2.5 microns or smaller
PM_{10}	Particulate matter; particulate matter 10 microns or smaller
ppb	parts per billion
ppm	parts per million
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District

SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SIL	Significant Impact Level
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
TAC	Toxic Air Contaminants
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

1.0 EXECUTIVE SUMMARY

The following air quality, greenhouse gas, and energy impact analysis was prepared to evaluate whether construction and operation of the Helena Agri-Enterprises Facility (Project) in the City of Lemoore, California would cause significant impacts with respect to air quality, greenhouse gases, and energy in the Project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA) (California Public Resources Code Sections 21000, et seq.).

Project Understanding

Helena Agri-Enterprises, LLC proposes to consolidate their existing agri-chemical operations from the City of Hanford to a new agri-chemical facility in the City of Lemoore.

Summary of Analysis Results

Impact AIR-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan. **Less Than Significant Impact.**

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

Impact AIR-3: The Project would not expose sensitive receptors to substantial pollutant concentrations. **Less Than Significant impact.**

Impact AIR-4: The Project would not result in other emissions (such as those leading to odors) affecting a substantial number of people. **Less Than Significant Impact.**

Impact GHG-1: The Project would not generate direct and indirect greenhouse gas emissions that would result in a significant impact on the environment. **Less Than Significant Impact.**

Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases. **Less Than Significant Impact.**

Impact ENERGY-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary

consumption of energy resources during project construction or operation. **Less Than Significant Impact.**

Impact ENERGY-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **Less Than Significant Impact.**

2.0 INTRODUCTION

2.1 REPORT PURPOSE

The purpose of this Air Quality, Greenhouse Gas, and Energy Impact Assessment Technical Study (Study) is to analyze potential air quality, greenhouse gas (GHG), and energy impacts that could occur from the construction and operation of the Helena Agri-Enterprises Facility in Lemoore (Project or proposed Project). This assessment was conducted within the context of the California Environmental Quality Act (CEQA).

2.2 PROJECT DESCRIPTION

Helena Agri-Enterprises, LLC proposes to consolidate their existing agri-chemical operations from the City of Hanford to a new agri-chemical facility in the City of Lemoore. The project site is located on Assessor Parcel Number 023-520-008 and 023-510-044. The project site is approximately 31.14 acres and is generally located south of West Industry Way, north of West Hills College and west of Leprino Foods Company (see Figure 1). The proposed project is requesting to construct and operate an agri-chemical facility in two phases.

Phase 1 would include the following:

- Truck/Tank Rinse Pad – 2,700 square feet (Location to be determined)
- 10'x70' Truck Scale
- Office – 4,200 square feet
- Shop – 6,300 square feet
- Warehouse – 40,500 square feet
- Tank Containment – 9,400 square feet (Approximately 670,000 gallons of liquid fertilizer)
- Storage Tanks – Four 500,000 gallon self-contained tanks
- Bulk Dry Fertilizer Warehouse – 36,600 square feet (Approximately 16,665 Tons)
- Railroad Tracks – Approximately 3,800 feet

When market conditions justify expansion, Phase 2 would include the following:

- Office – 2,400 square feet
- Tank Farm – 5,500 square feet (Approximately 450,000 gallons)
- Bulk Dry fertilizer Warehouse – 13,600 square feet (6,000 tons)
- Warehouse – 30,000 square feet
- Storage Tanks – Two 500,000 gallon self-contained tanks
- Railroad Tracks – 790 feet

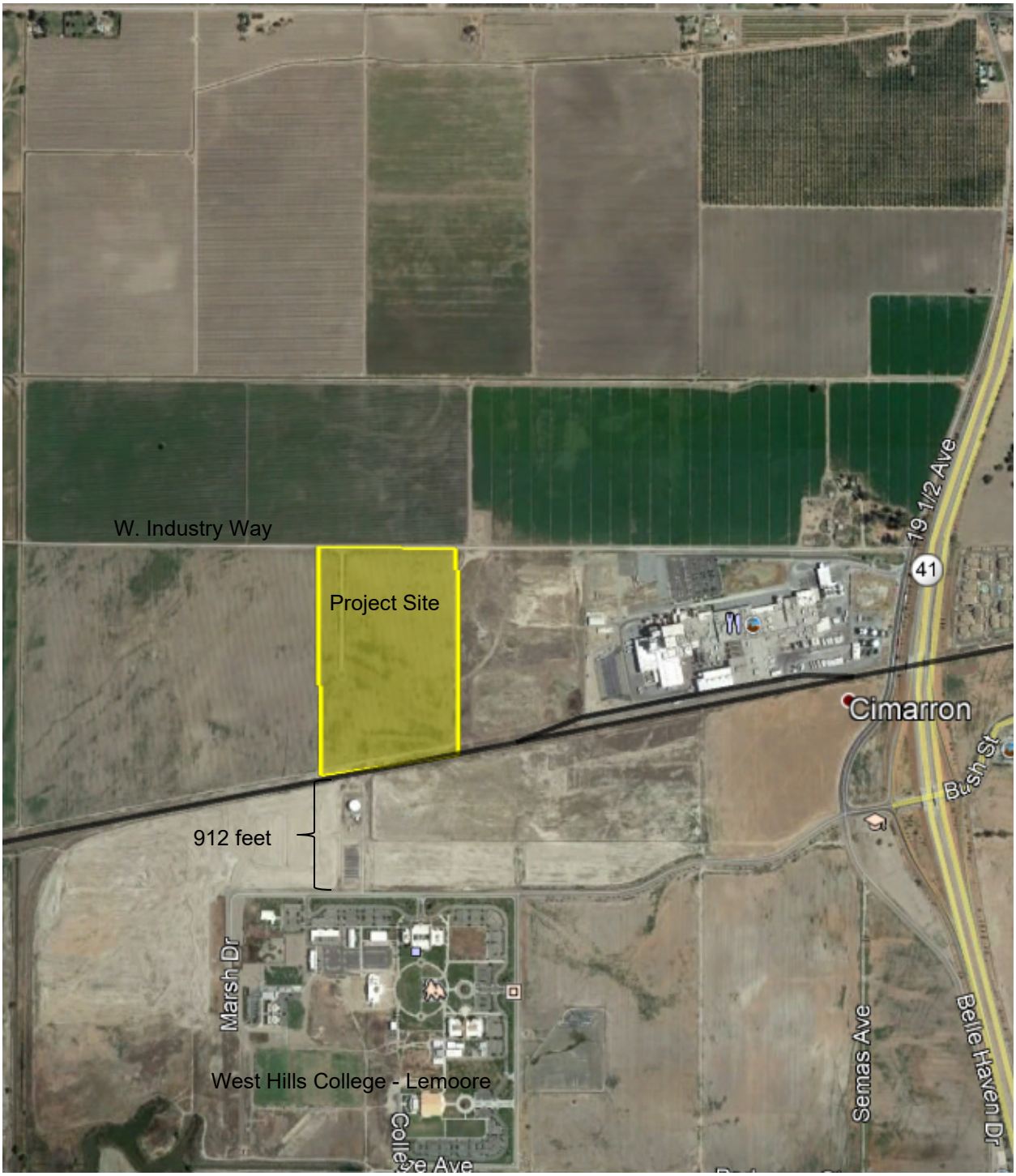

Figure 1 Project Location

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3.0 AIR QUALITY

3.1 ENVIRONMENTAL SETTING

The proposed project is located within the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in eight counties including: Fresno, Kern, (western and central), Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare.

Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources.

Activities that tend to increase mobile activity include increases in population, increases in general traffic activity (including automobiles, trucks, aircraft, and rail), urban sprawl (which will increase commuter driving distances), and general local land management practices as they pertain to modes of commuter transportation. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

3.1.1 Climate and Topography

The following information is excerpted from the most recent version of the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) adopted in March 2015 (SJVAPCD 2015).

The SJVAB has an “inland Mediterranean” climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Basin averages over 260 sunny days per year. The SJVAB is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the SJVAB form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Southeast Desert Air Basin portion of

Kern County. As the wind moves through the Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the SJVAB in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,000 feet during the winter. The result is a relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to carbon monoxide “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NO_X), which results in the formation of ozone.

Because of the prevailing daytime winds and time-delayed nature of ozone, concentrations are highest in the southern portion of the Basin. Summers are often periods of hazy visibility and occasionally unhealthful air, while winter air quality impacts tend to be localized and can consist of (but are not exclusive to) odors from agricultural operations; soot or smoke around residential, agricultural, and hazard-reduction wood burning; or dust near mineral resource recovery operations.

3.1.2 Criteria Air Pollutants

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards;

whereas standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report. Table 1 provides a summary of the California and National Ambient Air Quality Standards.

Table 1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone	1 Hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Respirable Particulate Matter	24 Hour	50 µg/m^3	150 µg/m3	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m^3	—	
Fine Particulate Matter	24 Hour	—	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	
Carbon Monoxide	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	—	—
Nitrogen Dioxide	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
	3 Hour	—	—	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)	—

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Lead	30-Day Average	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m^3	
Visibility-Reducing Particles	8 Hour	See Footnote 1	No National Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	—	

Notes:

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

µg/m^3 = micrograms per cubic meter

mg/m^3 = milligrams per cubic meter

Source: CARB 2016

The following provides a summary discussion of the primary and secondary criteria air pollutants of primary concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere.

Ozone

Ozone (O_3) is a reactive gas consisting of three atoms of oxygen. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends to a level about 10 miles up where it meets the second layer, the stratosphere. While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system.

Ozone, a colorless gas which is odorless at ambient levels, is the chief component of urban smog. Ozone is not directly emitted as a pollutant but is formed in the atmosphere when hydrocarbon and NO_X precursor emissions react in the presence of sunlight. Meteorology and terrain play major roles in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and cloudless skies provide the optimum conditions for ozone formation. As a result, summer is generally

the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often impacts a large area (California Air Resources Board [CARB] 2001, 2010).

Sources of precursor gases number in the thousands and include common sources such as consumer products, gasoline vapors, chemical solvents, and combustion byproducts of various fuels. Emissions of the ozone precursors ROG and NO_X most commonly originate from motor vehicles, as well as commercial and industrial uses.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Long-term exposure to ozone is linked to aggravation of asthma and is likely to be one of many causes of asthma development. Long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure (EPA 2019a).

Reactive Organic Gases and Volatile Organic Compounds

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including Volatile Organic Compounds (VOCs) and ROGs. ROGs include all hydrocarbons except those exempted by CARB. Therefore, ROGs are a set of organic gases based on state rules and regulations. VOCs are like ROGs in that they include all organic gases except those exempted by federal law.

Both VOCs and ROGs are emitted from incomplete combustion of hydrocarbons or other carbon- based fuels. Combustion engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of hydrocarbons. Another source of hydrocarbons is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects related to hydrocarbons stem from ozone (see discussion above). High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate national or California ambient air quality standards for ROG. Carcinogenic forms of ROG, such as benzene, are also considered toxic air contaminants (TACs).

Nitrogen Dioxide and Nitrogen Oxides

Nitrogen dioxide (NO_2) is one of a group of highly reactive gases known as "oxides of nitrogen (NO_X)." NO_2 is the component of greatest interest and the indicator for the larger group of NO_X. It forms quickly from emissions from cars, trucks, and buses, powerplants, and off-road equipment. NO_X is a strong oxidizing agent that reacts in the air to form corrosive nitric acid as well as toxic organic nitrates.

NO_X is emitted from solvents and combustion processes in which fuel is burned at high temperatures. Mobile sources (including on-road and off-road vehicles) and stationary sources such as electric utilities and industrial boilers, constitute a majority of the statewide NO_X emissions. To a lesser extent, area-wide sources, such as residential heaters, gas stoves, and managed burning and disposal, also contribute to total state-wide NO_X emissions (CARB 2010). NO_X is also linked to the formation of ground-level ozone and fine particle pollution (see discussion above for ozone and particulate pollution for additional discussion of health-related impacts).

Direct inhalation of NO_X can cause a wide range of health effects. NO_X can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of NO_2 may lead to changes in airway responsiveness and lung function in individuals with pre-existing respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO_2 may lead to increased susceptibility to respiratory infection and may cause irreversible lung damage. Other health effects are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_X can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to the production of particulate nitrates. Airborne NO_X can also impair visibility.

NO_X also contributes to a wide range of environmental effects both directly and indirectly when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins that are harmful to aquatic life).

Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates low pH

conditions and levels of aluminum that are toxic to fish and other aquatic organisms. NO_X also contributes to haze and visibility impairment (EPA 2019a, CARB 2016a).

Particulate Matter

Particulate matter (PM) is a mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, sulfates, and organic compounds; and complex mixtures such as diesel exhaust and soil. PM2.5 includes fine particles with a diameter of 2.5 microns or smaller and is a subset of PM10. These particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some particles, known as primary particles, are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks, or fires. Others form in complicated reactions in the atmosphere of chemicals such as sulfur dioxides and nitrogen oxides that are emitted from power plants, industries, and automobiles. These particles, known as secondary particles, make up most of the fine particle pollution in the country (EPA 2019a, CARB 2016a).

Area-wide sources account for about 65 and 83% of the statewide emissions of directly emitted PM2.5 and PM10, respectively. The major area-wide sources of PM2.5 and PM10 are fugitive dust, especially dust from unpaved and paved roads, agricultural operations, and construction and demolition. Sources of PM10 include crushing or grinding operations, and dust stirred up by vehicles traveling on roads. Sources of PM2.5 include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes.

Exhaust emissions from mobile sources contribute only a very small portion of directly emitted PM2.5 and PM10 emissions but are a major source of the VOC and NO_X that form secondary particles (CARB 2013).

PM2.5 and PM10 particles are small enough to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system’s natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases; heart and lung disease; and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. PM2.5 and PM10 can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Sensitive populations, including children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis are especially vulnerable to the effect of PM10. Non-health-related effects include reduced visibility and soiling of buildings.

Carbon Monoxide

Carbon Monoxide (CO) is an odorless, colorless gas that is highly toxic. CO is emitted by mobile and stationary sources because of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive.

CO enters the bloodstream and binds more readily to hemoglobin, the oxygen-carrying protein in blood, than oxygen, thereby reducing the oxygen-carrying capacity of blood and reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. Exposure to CO can cause chest pain in heart patients, headaches, and reduced mental alertness. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and, with prolonged enclosed exposure, death.

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (EPA 2019a).

Sulfur Dioxide

Sulfur Dioxide (SO_2) is one of a group of highly reactive gases known as “oxides of sulfur (SO_X).” It is a colorless, irritating gas with a “rotten egg” smell that is formed primarily by the combustion of sulfur-containing fossil fuels. The largest source of SO2 in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content. State and national ambient air quality standards for SO_2 are designed to protect against

exposure to the entire group of sulfur oxides (SO_X). SO_2 is the component of greatest concern and is used as the indicator for the larger group of gaseous sulfur oxides.

High concentrations of SO_2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO_2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer term exposures to high concentrations of SO_2 in conjunction with high levels of particulate matter include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. The subgroups of the population that may be affected under these conditions include individuals with heart or lung disease, as well as the elderly and children.

Together, SO_2 and NO_X are the major precursors to acidic deposition (acid rain), which is associated with the acidification of soils, lakes, and streams and accelerated corrosion of buildings and monuments. SO_2 also is a major precursor to PM2.5, which is a significant health concern, and a main contributor to poor visibility.

Lead

Lead (Pb) is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing. Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. The effects of lead are the same regardless of the path of exposure. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles.

Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death.

In pregnant women, high levels of exposure to lead may cause miscarriage. High level exposure in men can damage the organs responsible for sperm production.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood (Agency for Toxic Substances & Disease Registry [ATSDR] 2007a).

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) is a colorless gas with the odor of rotten eggs. H2S occurs naturally and is also produced by human activities. H2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. It can also result during bacterial decomposition of sulfur-containing organic substances. Emissions of H2S associated with human activities including various industrial activities, such as oil and gas production, refining, sewage treatment plants, food processing, and confined animal feeding operations.

Studies in humans suggest that the respiratory tract and nervous system are the most sensitive targets of H_2S toxicity. Exposure to low concentrations of H2S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Respiratory distress or arrest has been observed in people exposed to very high concentrations of H_2S. Exposure to low concentrations of H2S may cause headaches, poor memory, tiredness, and balance problems. Brief exposures to high concentrations of H_2S can cause loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in some individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. H_2S is extremely hazardous in high concentrations, especially in enclosed spaces. In some instances, exposure to high concentrations can cause death (ATSDR 2007b)

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The CARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. Below is a summary of these pollutants and a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates

Sulfates (SO_4) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The CARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilator function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride

Vinyl Chloride is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

3.1.3 Odors

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other

substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The SJVAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be subject to SJVAPCD Rule 4102, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SJVAPCD.

3.1.4 Toxic Air Contaminants

TACs are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered “criteria pollutants” under either the FCAA or the California Clean Air Act (CCAA) and are thus not subject to National or California ambient air quality standards (NAAQS and CAAQS, respectively). Instead, the EPA and the CARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (BACT) to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the

national levels, the EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects:

Diesel Particulate Matter

Diesel Particulate Matter (DPM) was identified as a TAC by the CARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 42% of the statewide total, with an additional 55% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3% of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (CARB 2013).

In October 2000, the CARB issued a report entitled: Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM by 85% by the year 2020, in comparison to year 2000 baseline emissions. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, and to lower the sulfur content of diesel fuel to protect new, and very effective, advanced technology emission control devices on diesel engines. When fully implemented, the DRPP will significantly reduce emissions from both old and new diesel fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, the CARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (CARB 2013). In comparison to year 2010 inventory of statewide DPM emissions, CARB estimates that emissions of DPM in 2035 will be reduced by more than 50%.

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. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NOx. NOx emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of PM2.5 and ozone.

In California, diesel exhaust particles have been identified as a carcinogen accounting for an estimated 70% of the total known cancer risks in California. DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over an estimated 70-year lifetime. Non- cancer health effects associated with exposure to DPM include premature death, exacerbated chronic heart and lung disease, including asthma, and decreased lung function in children. Short-term exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks (CARB 2016b).

Individuals most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to DPM (CARB 2016b). In addition to its health effects, DPM significantly contributes to haze and reduced visibility.

Asbestos

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

buildings in 1977. Exposure to naturally occurring asbestos can occur during soil disturbing activities in areas with deposits present.

3.1.5 Valley Fever

Valley Fever is an infection caused by a fungus that lives in the soil. About 10,000 U.S. cases are reported each year, mostly from Arizona and California. Valley fever can be misdiagnosed because its symptoms are like those of other illnesses.

The fungus that causes Valley fever, Coccidioides, is found in the southwestern United States, parts of Mexico and Central America, and parts of South America. The fungus grows naturally and is endemic in many areas including Kings County. People can get this infection by breathing in fungal spores from the air, especially when the wind blows the soil with the fungal spores into the air or the dirt is moved by human activity. About 40% of the people who come into contact with the fungal spores will develop symptoms that may require medical treatment and the symptoms will not go away on their own. Some people may develop a more severe infection, especially those with compromised immune systems (Centers for Disease Control and Prevention [CDC] 2018).

3.1.6 Attainment Status

The United States EPA and CARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual standard for PM2.5 is met if the 3-year average of the annual average PM2.5 concentration is less than or equal to the standard.

The current attainment designations for the SJVAB are shown in Table 2. The SJVAB is designated as nonattainment for ozone, PM10, and PM2.5.

Table 2: San Joaquin Valley Air Basin Attainment Status

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

Notes:

a See 40 CFR Part 81

b See CCR Title 17 Sections 60200-60210

c On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

d The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

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

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

Source: SJVAPCD 2021

3.1.7 Existing Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the Project. Table 3 summarizes published monitoring data for the most recent three-year period available from the nearest monitoring station at S. Irwin Street in Hanford. The data shows that during the past few years, the SJVAB has exceeded the ozone, PM10, and PM2.5 standards.

Table 3: Ambient Air Quality Summary

Air Pollutant	Averaging Time	Item	2017	2018	2019
Ozone	1 Hour[a]	Max 1 Hour (ppm)	0.106	0.108	0.093
		Days > State Standard (0.09 ppm)	7	1	0
	8 Hour	Max 8 Hour (ppm)	0.094	0.082	0.076
		Days > State Standard (0.070 ppm)	42	30	13
		Days > National Standard (0.070 ppm)	38	29	13
		Days > National Standard (0.075 ppm)	22	12	4
Carbon Monoxide	8 Hour	Max 8 Hour (ppm)	X	X	X
		Days > State Standard (9.0 ppm)	X	X	X
		Days > National Standard (9.0 ppm)	X	X	X
Nitrogen dioxide	Annual	Annual Average (ppm)	X	X	X
	1 Hour	Max 1 Hour (ppm)	56.9	56.3	62.9
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide	Annual	Annual Average (ppm)	X	X	X
	24 Hour	Max 24 Hour (ppm)	X	X	X
		Days > State Standard (0.04 ppm)	X	X	X
Inhalable coarse particles (PM10)	Annual (National)	Annual Average (µg/m^3)	49.9	47.3	44.8
	Annual (State)	Annual Average (µg/m^3)	47.2	47.9	45.2
	24 hour	24 Hour (µg/m^3) National	298.4	174.2	211.7
		24 Hour (µg/m^3) State	148.8	181.1	220.5
		Days > State Standard (50 µg/m3)	122	113.5	104.4
		Days > National Standard (150 µg/m^3)	1.0	6.1	6.6
	Annual (National)	Annual Average (µg/m^3)	17.2	17.7	12.2

Fine particulate matter (PM2.5)	Annual (State)	Annual Average (µg/m^3)	16.8	ID	12.1
	24 Hour	24 Hour (µg/m^3) National	113.4	107.8	48.2
		24 Hour (µg/m^3) State	113.4	107.8	46.4
		Days > National Standard (35 µg/m^3)	33.8	ID	21.0

Notes:
> = exceed
ppm = parts per million
g/m3 = micrograms per cubic meter
a = The Federal 1 hour Ozone Standard was revoked in June 2005; California retained a 1 hour Ozone Standard
ID = insufficient data
X = No data available because concentrations are no longer monitored
max = maximum
Bold = exceedance
State Standard = CAAQS
National Standard = NAAQS

Sulfur dioxide is reported on a statewide basis as it is no longer monitored locally

Sources: CARB 2021

The health impacts of the various air pollutants of concern can be presented in several ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy to understand measure of health impact compared to concentrations in the air. Table 4 provides a description of the health impacts ozone at different concentrations.

Table 4: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI 51–100—Moderate Concentration 55–70 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should considerlimiting prolonged outdoor exertion.
AQI 101–150—Unhealthy for Sensitive Groups	Sensitive Groups: Children and people with asthma are the groups most at risk.

Concentration 71–85 ppb	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151–200—Unhealthy Concentration 86–105 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201–300—Very Unhealthy Concentration 106–200 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.

Source: Air Now 2016.

The AQI for the 8-hour ozone standard is based on the current NAAQS of 70 parts per billion (ppb). Based on the AQI scale for the 8-hour ozone standard, the project area experienced 67 days in the last three years that would be categorized as very unhealthy (AQI 201–250), and as many as 80 days that were unhealthy (AQI 151–200) or unhealthy for sensitive groups (AQI 101–150), violating the 70-ppb standard as measured at the Hanford Irwin Street monitoring station. The highest reading was 108 ppb in 2018.

The other nonattainment pollutant of concern is PM2.5. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 35.4 µg/m^3, which is considered an exceedance of the federal PM2.5 standard. The monitoring station nearest the project exceeded the standard on 54 days over the past three years. People with respiratory or heart disease, the elderly and children are the

groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion. Unusually sensitive people should consider reducing prolonged or heavy exertion. The AQI of 150 or less is classified as unhealthy for sensitive groups with a $PM_{2.5}$ concentration of 55.4 µg/m^3. At this concentration, there is increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and in the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. AQI 151-200—unhealthful with a concentration of 55.5-150.4 µg/m^3—was also exceeded on at least 13 days in the last 3 years. The highest concentration recorded at the nearest monitoring station in Hanford was 113.4 µg/m^3 in 2017. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level.

Table 5: Air Quality Index and Health Effects from Particle Pollution

Air Quality Index/ PM2.5 Concentration	Health Effects Description
AQI 51–100—Moderate Concentration 12.1-35.4 µg/m^3	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101–150—Unhealthy for Sensitive Groups Concentration 35.5-55.4 µg/m^3	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151–200—Unhealthy Concentration 55.5-150.4 µg/m^3	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.

	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoorexertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201–300—Very Unhealthy 150.5-250.4 µg/m^3	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasingly severe symptoms and impairedbreathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratoryeffects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion;everyone else, especially children, should limit outdoor exertion.

Source: Air Now 2016.

3.1.8 Local Sources of Air Pollution

The Project's site is located in a predominately rural setting, where the main sources of air pollution are mobile sources traveling along the nearby roadways and highways, such as W. Industry Way and State Route 41, respectively. Additional sources of air pollution include the adjacent San Joaquin Valley Rail line and the nearby Leprino Foods Company.

3.1.9 Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. For purposes of CEQA, the SJVAPCD considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The following sensitive receptors have been identified (all distances are approximate):

- West Hills College – Lemoore – 912 feet south of the project site
- Multi-Family Residences – 4,010 feet east of the project site
- Single-Family Residence – 2,700 feet east of the project site

3.2 REGULATORY SETTING

Air quality within the project area is regulated by several jurisdictions including the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

3.2.1 Federal

U.S. Environmental Protection Agency

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the EPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 4.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the EPA established the NESHAPs. These are technology-based source-specific regulations that limit allowable emissions of HAPs. Among these sources include asbestos-containing building materials (ACBMs). NESHAPs include requirements pertaining to the inspection, notification, handling, and disposal of ACBMs associated with the demolition and renovation of structures.

3.2.2 State

California Air Resources Board

The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management

districts), establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used. The CAAQS are summarized in Table 1.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC.

Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Assembly Bill 617

In response to AB 617 (C. Garcia, Chapter 136, Statutes of 2017), the CARB established the Community Air Protection Program. The Community Air Protection Program includes community air monitoring and community emissions reduction program’s focus is to reduce exposure in communities most impacted by air pollution. The Legislature has appropriated funding to support early actions to address localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and

availability of air quality and emissions data, which will help advance air pollution control efforts throughout the State.

Portable Equipment Registration Program

Owners or operators of portable engines and certain other types of equipment can register their units under the CARB's Statewide Portable Equipment Registration Program (PERP). PERP allows registered equipment to be operated throughout California without having to obtain individual permits from local air districts. To qualify, equipment must meet eligibility requirements, including applicable emissions standards.

Naturally-Occurring Asbestos Regulations

CARB has adopted two Airborne Toxic Control Measures (ATCMs) which regulates the control of Naturally Occurring Asbestos (NOA) associated with construction, surfacing, grading, mining, and quarrying activities. The NCUAQMD is responsible for enforcing Asbestos ATCMs. There are no known likely areas of NOA in the Project area (USGS 2011).

Regulatory Attainment Designations

Under the CCAA, CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for O_3, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, EPA assigned new nonattainment designations to areas that had

previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

As discussed previously, the SJVAB is designated as nonattainment for the federal ozone and $PM_{2.5}$ standards. The SJVAB is nonattainment for State ozone, PM10, and $PM_{2.5}$ standards.

3.2.3 Local

San Joaquin Valley Air Pollution Control District

The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SJVAB, within which the proposed project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

SJVAPCD Rules and Regulations

The SJVAPCD rules and regulations that may apply to projects that will occur during buildout of the project include but are not limited to the following:

Rule 2010 – Permits Required. The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting or falsifying any Permit to Operate.

Rule 2201 – New and Modified Stationary Source Review Rule. The purpose of this rule is to provide for the following:

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

- No net increase in emissions above specified thresholds from new and modified Stationary Sources of all nonattainment pollutants and their precursors.

Rule 4002 – National Emission Standards for Hazardous Air Pollutants. This rule incorporates the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR).

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

Rule 4307 – Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr. The purpose of this rule is to limit emissions of oxides of nitrogen, carbon monoxide, oxides of sulfur, and particulate matter 10 microns or less from boilers, steam generators, and process heaters.

Rule 4623 – Storage of Organic Liquids. The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids.

Rule 4624 – Transfer of Organic Liquids. The purpose of this rule is to limit volatile organic compound (VOC) emissions from the transfer of organic liquids.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.

Regulation VIII – Fugitive PM10 Prohibitions. Rule 8011-8081 are designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

CEQA

The SJVAPCD has three roles under CEQA:

Lead Agency: responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the District where the District has primary approval authority over the project.

Responsible Agency: The discretionary authority of a Responsible Agency is more limited than a Lead Agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance. The District defers to the Lead Agency for preparation of environmental documents for land use projects that also have discretionary air quality permits unless no document is prepared by the Lead Agency and potentially significant impacts related to the permit are possible. The District comments on documents prepared by Lead Agencies to ensure that District concerns are addressed.

Commenting Agency: The District reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The SJVAPCD also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance as well as state regulations to control air pollution is an overall improvement in the Air Basin. In particular, the SJVAPCD's 2015 GAMAQI states the following:

1. The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long-range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.

2. The Air Quality Guidelines for General Plans (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities and counties may want to incorporate into their General Plans to satisfy Section 65302.1. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by adopting the suggested policies and programs.

City of Lemoore

The City of Lemoore adopted its General Plan in 2008 (City of Lemoore, 2008). The City's General Plan included several Guiding Policies and Implementing Policies that would be applicable to the proposed Project.

Guiding Policies

COS-G-12 Make air quality a priority in land use planning by implementing emissions reduction efforts targeting mobile sources, stationary sources and construction-related sources.

COS-G-13 Minimize exposure to toxic air pollutant emissions and noxious odors from industrial, manufacturing and processing facilities.

COS-G-14 Utilize diverse and creative mitigation approaches to manage remaining levels of air pollution that cannot be reduced or avoided.

Implementing Policies

COS-I-39 Support State efforts to reduce greenhouse gases and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.

COS-I-47 Coordinate air quality planning efforts and CEQA review of discretionary projects with potential for causing adverse air quality impacts with other local, regional and State agencies.

The City will work with the San Joaquin Valley Air Pollution Control District on parallel initiatives for air quality, so programs are complementary and uniform wherever possible.

COS-I-49 Require tenants of all new development within one mile of industrial land uses to record odor easements attesting to the presence of nearby industry and acknowledging the right of said industry to emit odors that are not a threat to human health.

4.0 GREENHOUSE GASES

4.1 ENVIRONMENTAL SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

4.1.1 Greenhouse Gases

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Primary GHGs attributed to global climate change, are discussed in the following subsections.

Carbon Dioxide

Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (EPA 2019b).

Methane

CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87% by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from a variety of both human-related and natural sources.

Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years (EPA 2019b).

Nitrous Oxide

N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (EPA 2017b).

Hydrofluorocarbons

HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (EPA 2017b).

Perfluorocarbons

PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (EPA 2017b).

Nitrogen Trifluoride

Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. NF_3 is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. In 2009, NF_3 was listed by California as a potential GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).

Sulfur Hexafluoride

SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80% of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (EPA 2017b).

Black Carbon

Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, including programs that target reducing PM from diesel engines and burning activities (CARB 2013).

4.1.2 Global Warming Potential

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential (GWP).

Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Based on a 100-year time

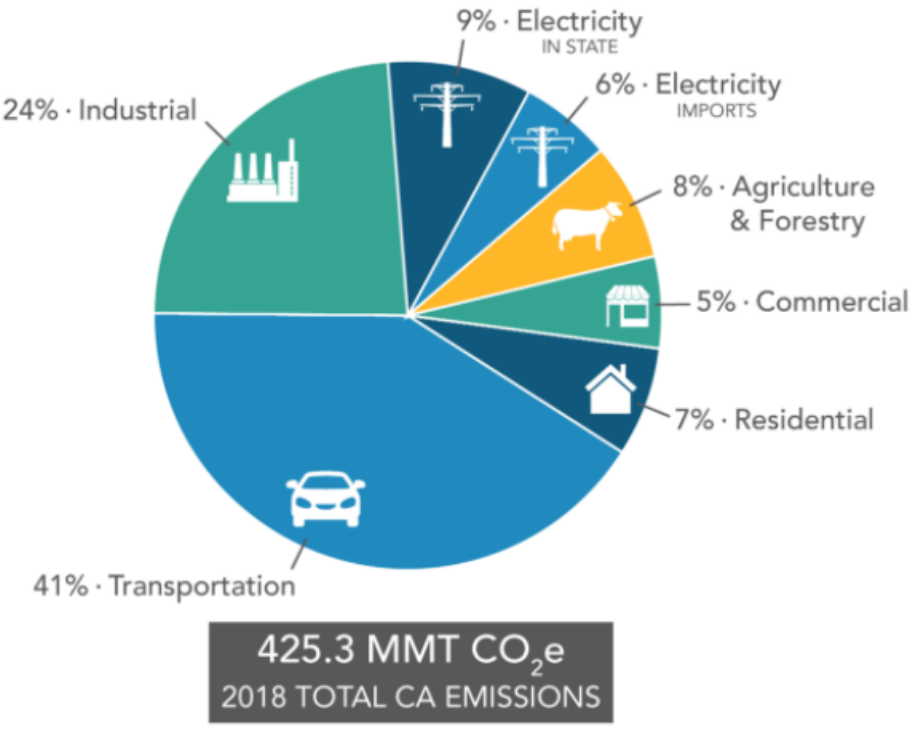
horizon, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHGs with high GWP include NF_3, SF_6, PFCs, and black carbon.

4.1.3 Sources of Greenhouse Gas Emissions

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions.

California's most recent GHG emissions inventory is depicted in Figure 2.

Figure 2 GHG Emissions by Economic Sector



Source: CARB 2018

In 2018, GHG emissions within California totaled 425.3 million metric tons (MMT) of CO_2e. Within California, the transportation sector is the largest contributor, accounting for approximately 41% of the total statewide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 24%. Electricity generation totaled roughly 15% (CARB 2018).

4.1.4 Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50% of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the state's energy resources. An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

4.2 REGULATORY SETTING

4.2.1 Federal

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

On April 2, 2007, in *Massachusetts v. USEPA*, 549 US 497, the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act (CAA). The Court held that

the Unites States Environmental Protection Agency (USEPA) must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the USEPA is required to follow the language of Section 202(a) of the CAA.

On April 17, 2009, the USEPA Administrator signed proposed "endangerment" and "cause or contribute" findings for GHGs under Section 202(a) of the CAA. The USEPA held a 60-day public comment period, considered public comments, and issued final findings. The USEPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse effect as air pollution that endangers public health and welfare under CAA Section 202(a).

Clean Vehicles

In collaboration with the National Highway Traffic Safety Administration, the USEPA adopted GHG emission standards for light-duty vehicles in May 2010 and for heavy-duty vehicles in August of 2011. In 2012, the agencies jointly adopted more stringent Phase 2 standards for light duty cars and trucks, which would cover model years 2017 through 2025. In August of 2016, the agencies adopted more stringent Phase 2 standards for medium- and heavy-duty vehicles, which would cover 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.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the EPA to develop "…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy…." The Reporting Rule applies to most entities that emit 25,000 metric tons of CO_2e ($MTCO_2e$) or more per year. Since 2010, facility owners must submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the EPA to verify annual GHG emissions reports.

New Source Review

The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs, which will define when permits under the New Source Review Prevention of Significant

Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units

As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology.

President Obama and the EPA announced the Clean Power Plan in August of 2015. In 2030, the Clean Power Plan would cut carbon pollution from power plants by 32 percent below 2005 levels and increase renewable energy generation percent to nearly 20 percent of all power supplied. By comparison, in 2015, renewable energy accounted for about 13% of electricity generation. However, on February 9, 2016, the U.S. Supreme Court stayed implementation of the Clean Power Plan pending judicial review and on March 28, 2017, the Executive Order on Energy Independence (EO 13783) was signed and called for a review of the Clean Power Plan (USEPA 2018a). On October 16, 2017, the EPA issued the proposed rule Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units an Energy Independence (EPA 2017).

Cap-and-Trade

Cap-and-Trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. There is no federal GHG Cap-and-Trade program currently; however, some states have joined to create initiatives to provide a mechanism for Cap-and-Trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions

from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the Cap-and-Trade program (C2ES 2015).

4.2.2 State

Assembly Bill 32

The California State Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, methane (CH_4), nitrogen oxides (NO_X), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The California Air Resources Board (CARB) is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*

CARB approved the 1990 GHG emissions level of 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) on December 6, 2007 (CARB 2007). Therefore, to meet the state's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a business as usual (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (CARB 2008). At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth.

The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (CARB 2010).

Progress in Achieving Assembly Bill 32 Targets and Remaining Reductions Required

The state has made steady progress in implementing AB 32 and achieving targets included in EO S-3-05. The progress is evident in updated emission inventories prepared by CARB, which showed that the state inventory dropped below 1990 levels for the first time in 2016 (CARB 2018). CARB's Climate Change Scoping Plan (Scoping Plan) (subsequently amended by the 2017 update) includes projections indicating that the state would meet or exceed the 2020 target with adopted regulations (CARB 2017).

CARB 2008 Scoping Plan

The Scoping Plan contains measures designed to reduce the state's emissions to 1990 levels by the year 2020 to comply with AB 32 (CARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include the following:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California Cap-and-Trade Program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between “capped” and “uncapped” strategies. Capped strategies are subject to the proposed Cap-and-Trade Program. The Scoping Plan states that the inclusion of these emissions within the Cap-and-Trade Program would help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps, and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (CARB 2008).

Cap-and-Trade Program

The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California’s 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 program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec’s Cap-and-Trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit would not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are guaranteed only on an accumulative basis.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California’s direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program would be responsible for relatively fewer emissions reductions. If California’s direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program would be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California would meet its 2020 GHG emissions reduction mandate.

CARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identified the next steps for California’s climate change strategy. The Update

shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report established a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

Assembly Bill 398

The Governor signed AB 398 on July 25, 2017, to extend the Cap-and-Trade Program to 2030.The legislation includes provisions to ensure that offsets used by sources are limited to 4 percent of their compliance obligation from 2021 to 2025 and 6 percent of their compliance obligation from 2026 through 2030. AB 398 also prevents air districts from adopting or implementing emission reduction rules from stationary sources that are also subject to the Cap-and-Trade Program (CARB 2017).

Senate Bill 32

Senate Bill (SB) 32 was signed into law on September 8, 2016. SB 32 gives CARB the statutory responsibility to include the 2030 target previously contained in EO B-30-15 in the 2017 Scoping Plan Update. SB 32 states that “In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.”

2017 Climate Change Scoping Plan Update

The 2017 Climate Change Scoping Plan Update was adopted on December 14, 2017 amending the 2008 Scoping Plan and addresses the SB 32 targets. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
    a. Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
    b. Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard
    a. Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)

a. Maintaining existing GHG standards for light- and heavy-duty vehicles.

b. Put 4.2 million zero-emission vehicles on the roads.

c. Increase zero-emission vehicles buses and delivery and other trucks.

4. Sustainable Freight Action Plan

   a. Improve freight system efficiency.

   b. Maximize use of near-zero emission vehicles and equipment powered by renewable energy.

   c. Deploy over 100,000 zero-emission trucks and equipment by 2030.

5. Short-Lived Climate Pollutant Reduction Strategy

   a. Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.

   b. Reduce emissions of black carbon 50 percent below 2013 levels by 2030.

6. SB 375 Sustainable Communities Strategies

   a. Increased stringency of 2035 targets.

7. Post-2020 Cap-and-Trade Program

   a. Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.

   b. CARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, CARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

8. 20 percent reduction in GHG emissions from the refinery sector.

9. Develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Many of the measures included in the 2017 Climate Change Scoping Plan Update are implemented on a statewide level and do not specifically apply to the Project. However,

the short-lived climate pollutants would be applicable to the Program through the use of cleaner construction equipment.

Senate Bill 375: The Sustainable Communities and Climate Protection Act of 2008

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits more than 40 percent of the total GHG emissions in California. SB 375 states, “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

CARB has prepared the Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets.

Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations and fuel efficiency standards that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by USEPA’s denial of an implementation waiver. USEPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.

The standards were phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards resulted in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards resulted in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation, rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for AB 1493 was incorporated into Amendments to the Low-Emission Vehicle Program, referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Cars program combines the control of smog-causing pollutants and GHG emissions into a single coordinated

package of requirements for model years 2017 through 2025. The regulation would reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The rules would reduce pollutants from gasoline and diesel-powered cars and would deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles, and hydrogen fuel cell cars. The regulations would also ensure that adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

Senate Bill 1368: Emission Performance Standards

In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant.

Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds of CO_2 per megawatt-hour (MWh).

Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed EO S-14-08, which established an RPS target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger signed EO S-21-09, which directed CARB to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23. In 2011, the State Legislature adopted this higher standard in SB X1-2. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The legislature approved and the governor then signed SB 350 on October 7, 2015, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations.

Senate Bill 100: California Renewables Portfolio Standard Program.

The Governor approved SB 100 on September 10, 2018. The legislation revised the RPS goals to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill would require that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030.

Senate Bill X7-7: The Water Conservation Act of 2009

SB X7-7 directs urban retail water suppliers to set individual 2020 per capita water use targets and to begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet of urban water use in 2020.

Executive Order S-3-05

On June 1, 2005, former California Governor Arnold Schwarzenegger announced EO S-3-05, which announced the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an EO, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris in late 2015. The EO sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure that California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The EO also requires the state's climate adaptation plan to be updated every 3 years and for the state to continue its climate change research program, among other provisions. As with EO S-3-05, this EO is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to provide post-2020 targets was signed by the Governor in 2016. SB 32 includes a 2030 mandate matching the requirements of the EO.

Executive Order S-01-07: Low Carbon Fuel Standard

The governor signed EO S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the EO established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, CARB was required to bring a new LCFS regulation for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Office of Administrative Law approved the regulation on November 16, 2015. The regulation was last amended in 2018.

Executive Order S-13-08

EO S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the EO, the 2009 California Climate Adaptation Strategy was adopted, which is the "… first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-55-18

EO B-55-18 issued by Governor Brown on September 10, 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and to achieve and maintain net negative emissions thereafter. The EO directs CARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal.

California Energy Code

Compliance with the California Energy Code (Title 24, Part 6, of the California Code of Regulations [CCR], California's Energy Efficiency Standards) and Title 20, Public Utilities and Energy, standards must occur for all new buildings constructed in California. These efficiency standards apply to new construction of both residential and nonresidential (i.e., maintenance buildings and pump station buildings associated with the Program) buildings, and they regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit processes, and local government agencies may adopt and enforce energy standards for new buildings provided that these standards meet or exceed those provided in the Title 24 guidelines.

4.2.3 Local

San Joaquin Valley Air Pollution Control District

On December 17, 2009, the San Joaquin Valley Air Pollution Control District (SJVAPCD) Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects

Under CEQA When Serving as the Lead Agency." SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climate change. SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climate change could be considered cumulatively considerable. SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

City of Lemoore

The City of Lemoore does not currently have formal greenhouse gas emission reduction plans or recommended emission thresholds for determining significance associated with greenhouse gas emissions from development projects. The City of Lemoore adopted its General Plan in 2008 (City of Lemoore, 2008). The City's General Plan included several Guiding Policies and Implementing Policies that would be applicable to the proposed Project.

Guiding Policies

COS-G-12 Make air quality a priority in land use planning by implementing emissions reduction efforts targeting mobile sources, stationary sources and construction-related sources.

Implementing Policies

COS-I-39 Support State efforts to reduce greenhouse gases and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.

CD-I-58 Require new development to incorporate passive heating and natural lighting strategies to the extent feasible and practical. These strategies should include, but are not limited to, the following:

- Using building orientation, mass and form, including façade, roof, and choice of building materials, color, type of glazing, and insulation to minimize heat loss during winter months and heat gain during the summer months;
- Designing building openings to regulate internal climate and maximize natural lighting, while keeping glare to a minimum; and
- Reducing heat-island effect of large concrete roofs and parking surfaces.

CD-I-62 Facilitate environmentally sensitive construction practices by:

- Restricting use of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and halons in mechanical equipment and building materials;
- Promoting use of products that are durable and allow efficient end-of-life disposal (recyclable);
- Requiring subdivision applications on sites greater than five acres to submit a construction waste management plan for City approval;
- Promoting the purchase of locally or regionally available materials; and
- Promoting the use of cost-effective design and construction strategies that reduce resource and environmental impacts.

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5.0 ENERGY

5.1 ENVIRONMENTAL SETTING

Pacific Gas and Electric Company provides electricity and natural gas service to the City. Upon buildout of the project site, electricity to the project site would be provided by PG&E. All electricity infrastructure would be located underground and would tie-in to existing infrastructure.

In February 2018, PG&E announced that it had reached California's 2020 renewable energy goal 3 years ahead of schedule, and now delivers nearly 80 percent of its electricity from greenhouse gas (GHG)-free resources. Approximately 33 percent of PG&E's electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources in 2017. Additionally, approximately 78.8 percent of PG&E's total electric power mix is from GHG-free sources including nuclear, large hydro and renewable sources of energy.

5.2 REGULATORY SETTING

5.2.1 Federal

Federal Energy Policy and Conservation Act

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

Energy Independence and Security Act of 2007

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

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

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

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

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

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

Federal Vehicle Standards

The Energy Policy and Conservation Act of 1975 (EPCA) mandated that the National Highway Traffic Safety Administration (NHTSA) establish and implement a regulatory program for motor vehicle fuel economy, known as the corporate average fuel economy (CAFE) program, to reduce national energy consumption. As codified in Chapter 329 of Title 49 of the U.S. Code (U.S.C.) and, as amended by the Energy Independence and Security Act of 2007 (EISA), EPCA sets forth specific requirements concerning the establishment of average fuel economy standards for passenger cars and light trucks. These are motor vehicles with a gross vehicle weight rating less than 8,500 pounds and medium-duty passenger vehicles with a gross vehicle weight rating less than 10,000 pounds. The Secretary of Transportation delegated responsibility for implementing the CAFE program to NHTSA.

EISA, enacted by Congress in December 2007, amended the EPCA CAFE program requirements by providing the Department of Transportation (DOT) additional rulemaking authority and responsibilities. Consistent with its statutory authority, in

rulemaking to establish CAFE standards for model year 2017 and beyond passenger cars and light trucks, NHTSA developed two phases of standards. The first phase included final standards for model years 2017–2021. The second phase, covering model years 2022–2025, included standards that were not final, due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. Rather, NHTSA wrote that those standards were augural, meaning that they represented its best estimate, based on the information available at that time, of what levels of stringency might be maximum feasible in those model years. In 2012, the agencies jointly adopted more stringent Phase 2 standards for light duty cars and trucks, which would cover model years 2017 through 2025. In August of 2016, the agencies adopted more stringent Phase 2 standards for medium- and heavy-duty vehicles, which would cover 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.

On March 31, 2020, NHTSA and the USEPA released a new rule, the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, setting CAFE and carbon dioxide (CO2) emissions standards for model years 2021 through 2026 passenger cars and light trucks. The rule rolls back the 2012 standards for model years 2021 through 2026 for passenger cars and light trucks which required an average fleetwide fuel economy equivalent of 54.5 miles per gallon in model year 2025 with a 5 percent annual increase to an average fuel economy of about 40 miles per gallon in model year 2025 with annual increases of 1.5 percent starting in 2021. As a part of issuing the new SAFE rule, NHTSA issued a Final Environmental Impact Statement which found that the relaxed standards would result in increased petroleum consumption which in turn would result in increases to greenhouse gases and criteria pollutants known to contribute to adverse health impacts (NHTSA 2020). These estimated increases from the roll back of the 2012 standards are expected to result in more than a billion metric tons additional climate pollution through 2040 as determined by calculating the difference from the reduction of 2 billion metric tons the 2012 rule was expected to accomplish compared to the standards of the 2020 rule (NHTSA 2020).

5.2.2 State

In addition to the myriad of GHG legislation and Executive Orders that have the cross benefit of reducing energy usage, the State also has an aggressive Energy Code.

California Energy Code

Compliance with the California Energy Code (Title 24, Part 6, of the California Code of Regulations [CCR], California's Energy Efficiency Standards) and Title 20, Public

Utilities and Energy, standards must occur for all new buildings constructed in California. These efficiency standards apply to new construction of both residential and nonresidential (i.e., maintenance buildings and pump station buildings associated with the Program) buildings, and they regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit processes, and local government agencies may adopt and enforce energy standards for new buildings provided that these standards meet or exceed those provided in the Title 24 guidelines.

5.2.3 Local

City of Lemoore

The City of Lemoore does not currently have an adopted plan for renewable energy or energy efficiency. The City of Lemoore adopted its General Plan in 2008 (City of Lemoore, 2008). The City's General Plan included some Guiding Policies and Implementing Policies that would be applicable to the proposed Project with respect to energy usage.

Guiding Policies

CD-G-15 Provide leadership and guidance to encourage the application of sustainable site planning and green building practices in Lemoore.

Implementing Policies

CD-I-58 Require new development to incorporate passive heating and natural lighting strategies to the extent feasible and practical. These strategies should

CD-I-60 Incorporate green building standards into the Zoning Ordinance and building code to ensure a high level of energy efficiency in new development, retrofitting projects, and City facilities.

COS-I-39 Support State efforts to reduce greenhouse gases and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 MODEL SELECTION

The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, CalEEMod identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user.

CalEEMod was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California Air Districts to account for local requirements and conditions.

CalEEMod is a comprehensive tool for quantifying air quality impacts from land use projects located throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as preparing CEQA or National Environmental Policy Act documents, conducting pre-project planning, and, verifying compliance with local air quality rules and regulations, etc.

CalEEMod version 2016.3.2 was used to estimate construction and operational impacts of the Project.

6.2 AIR POLLUTANTS AND GHGS ASSESSED

6.2.1 Criteria Air Pollutants Assessed

The following criteria air pollutants are assessed in this analysis: ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$.

Note that the proposed Project would emit ozone precursors ROG and NO_X. However, the proposed Project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone precursors.

6.2.2 GHGs Assessed

This analysis is restricted to GHGs identified by AB 32, which include CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3. The proposed Project would generate a variety of GHGs, including several defined by AB 32 such as CO_2, CH_4 and N_2O.

Certain GHGs defined by AB 32 would not be emitted by the project. PFCs, SF_6, and NF_3 are typically used in industrial applications, none of which would be used by the proposed Project. Therefore, it is not anticipated that the proposed Project would emit those GHGs.

GHG emissions associated with the proposed Project construction, and future operations were estimated using CO_2e emissions as a proxy for all GHG emissions. In order to obtain the CO_2e, an individual GHG is multiplied by its GWP. The GWP designates on a pound for pound basis the potency of the GHG compared to CO_2.

6.3 ASSUMPTIONS

6.3.1 Construction Modeling Assumptions

Construction of Phase 1 would begin in January 2022 and would be completed by March 2023. It is unknown when the second phase of construction would occur, however, to provide a conservative estimate it was assumed that this second phase would begin construction in January 2025 and would be completed by February 2026.

The construction schedule utilized in the analysis represents a “worst-case” analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moved to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as require per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was estimated based on consultation with the design engineers and a 2023 opening year for project operations. Associated construction equipment was based on consultation with the applicant and past project experience.

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty

construction equipment, motor vehicle operation, and fugitive dust (mainly PM10) from disturbed soil.

Off-site construction emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$). Unless project-specific information was provided, CalEEMod default values were used to estimate the number of construction-related vehicle trips. CalEEMod quantifies the number of construction workers by multiplying 1.25 times the number of pieces of equipment for all phases (except Building Construction and Architectural Coating). For the Building Construction, the number of workers is derived from a study conducted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) which determined the number of workers needed for various types of land uses and corresponding project size. The number of vendor trips during the Building Construction phase is also derived from a study conducted by the SMAQMD. The SMAQMD trip survey during construction counted cement and water trucks as vendor trips (instead of counting them as off-road vehicle trips) and these trip rates were incorporated into the calculations for the Building Construction phase. The default values for hauling trips are based on the assumption that a truck can haul 20 tons (or 16 cubic yards) of material per load. If one load of material is delivered, CalEEMod assumes that one haul truck importing material will also have a return trip with an empty truck (e.g., 2 one-way trips).

The fleet mix for worker trips is light-duty passenger vehicles to light-duty trucks. The vendor trips fleet mix is composed of a mixture of medium and heavy-duty diesel trucks. The hauling trips are assumed to be 100% heavy-duty diesel truck trips.

CalEEMod default trip lengths were used for the worker (16.8. miles), vendor (6.6 miles), and hauling trips (20 miles).

The following section summarizes the model inputs for each phase of the project.

Phase 1 Construction

Table 6: Construction Shedule – Phase 1

Construction Task	Start Date	End Date	Workdays
Site Preparation	1/3/2022	1/5/2022	3
Grading	1/6/2022	2/24/2022	36
Building Construction	2/25/2022	2/23/2023	260
Paving	2/24/2023	3/9/2023	10

Source: CalEEMod 2013 and Project Applicant

Table 7: Project Construction Equipment – Phase 1

Construction Task	Equipment Type	# of Equipment	Usage (hours/day)	HP	Load Factor
Site Preparation	Scrapers	2	8	367	0.48
	Tractors/Loaders/ Backhoes	1	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Scrapers	2	8	367	0.48
	Tractors/Loaders/ Backhoes	2	8	97	0.37
Building Construction	Cranes[1]	1	1.08	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/ Backhoes	3	7	97	0.37
	Welders[1]	1	1.23	46	0.45
Paving	Pavers	1	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38

Notes:

1. Daily hours adjusted to reflect only eight weeks of use

Source: CalEEMod 2013 and Project Applicant

Table 8: Construction-Related Vehicle Trips – Phase 1

Phase Name	Worker Trip Number (per day)	Vendor Trip Number (per day)	Hauling Trip Number (total)	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Site Preparation	20	0	10	16.8	6.6	20
Grading	24	0	510	16.8	6.6	20
Building Construction	42	16	1,185	16.8	6.6	20
Paving	15	0	10	16.8	6.6	20

Source: CalEEMod 2016.3.2 and Project Applicant

Phase 2 Construction

Table 9: Construction Shedule – Phase 2

Construction Task	Start Date	End Date	Workdays
Site Preparation	1/6/2025	1/8/2025	3
Grading	1/9/2025	2/20/2025	31
Building Construction	2/21/2025	2/19/2026	260

Source: CalEEMod 2013 and Project Applicant

Table 10: Project Construction Equipment – Phase 2

Construction Task	Equipment Type	# of Equipment	Usage (hours/day)	HP	Load Factor
Site Preparation	Tractors/Loaders/ Backhoes	1	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Scrapers	1	8	367	0.48
	Tractors/Loaders/ Backhoes	2	8	97	0.37
Building Construction	Cranes[1]	1	1.08	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/ Backhoes	3	7	97	0.37
	Welders[1]	1	1.23	46	0.45

Notes:

1. Daily hours adjusted to reflect only eight weeks of use

Source: CalEEMod 2013 and Project Applicant

Table 11: Construction-Related Vehicle Trips – Phase 2

Phase Name	Worker Trip Number (per day)	Vendor Trip Number (per day)	Hauling Trip Number (total)	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Site Preparation	18	0	10	16.8	6.6	20
Grading	20	0	10	16.8	6.6	20
Building Construction	19	8	10	16.8	6.6	20

Source: CalEEMod 2016.3.2 and Project Applicant

6.3.2 Operational Modeling Assumptions

Operational emissions are those emissions that occur during operation of the proposed Project. The sources are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the proposed project site. The trip generation rate from the Traffic Study was used for the project.

Table 12: Trip Generation Rates

General Information	Weekday Daily Trips		Saturday Daily Trips	
Traffic Type	**Variable**	**ADT**	**Variable**	**ADT**
Employees	22	68	16	50
Heavy-Duty Trucks	35	70	26	52

Notes:
ADT = Average Daily Trips
Source: Ruettgers & Schuler Civil Engineers Traffic Study, February 2021

Types of Vehicle Trips

Primary trips are trips are specifically made to the Project site and represent new vehicle trips to the area. A pass-by trip accounts for vehicles already on the roadway network that stop at the Project site as they pass-by; the pass-by trips are existing

vehicle trips in the community. Diverted trips represent new trips to the site and adjacent streets, but not to the area. CalEEMod default trip type percentages were adjusted to reflect 100 percent primary trips.

Trip Lengths

Based on the existing facility operations in Hanford, an average vehicle trip length for the Heavy-Duty Trucks was determined to be 30 miles. The CalEEMod default value of 14.7 miles was used for the employee trips.

Vehicle Fleet Mix

The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the proposed Project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline- and diesel-powered vehicles). The fleet mix was adjusted to reflect 100 percent Heavy-Heavy Duty Diesel Trucks for fertilizer deliveries and a light-duty to light-heavy duty truck fleet mix for employee vehicles as shown below.

Table 13: Fleet Mix for Employees

Adjusted Fleet Mix	LDA	LDT1	LDT2	MDV	LHD1	LHD2	Total
	63%	3%	19%	13%	2%	1%	100%

Area Sources

Area sources consist of hearths, consumer products, area architectural coatings, and landscaping emissions.

Consumer Products

Consumer products are various solvents used in non-industrial applications that emit ROGs during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics and toiletries. The default CalEEMod value was used for this Project.

Architectural Coatings (Painting)

Paints and surface coatings release VOC emissions. CalEEMod defaults were used for this purpose.

Landscaping Emissions

CalEEMod estimated a total of 180 days for which landscaping equipment would be used to estimate potential emissions for the proposed Project.

Energy Use

The emissions associated with the Project electricity and natural gas usage are estimated based on the land use type and size. The electricity energy use is in units of kilowatt hours per size metric for each land use type. Natural gas use is in units of a thousand British Thermal Units per size metric for each land use type. CalEEMod default values for a manufacturing facility were used.

Water and Wastewater Use

Supplying and treating water for the facility generates GHG emissions. Depending on the specific water supply used or treatment method used these numbers can vary over a wide range. Supplying water is bringing the water from its primary source such as the ground, river, or snowpack to the treatment plant. Distributing the water is bringing the water from the treatment plant to the end users. The electricity intensity factors are multiplied by the utility GHG emissions intensity factors for the GHGs and are classified as indirect emissions. The Project is estimated to use up to 1,000,000 gallons of water annually.

Wastewater may also have direct emissions of GHGs. These depend on the type of wastewater treatment system (e.g., septic, aerobic or lagoons) used and therefore the wastewater treatment type percentages are variables. CalEEMod default values were used.

Solid Waste

GHG emissions are associated with the disposal of solid waste generated by the proposed Project into landfills. The CalEEMod default value for a manufacturing facility was used.

Stationary Sources

The proposed Project would include a boiler sized up to 2 million metric tons British Thermal Units (MMBtu). CalEEMod default emission factors were used to estimate emissions from this stationary source.

Rail Emissions

The proposed Project would be served by San Joaquin Valley Railroad. It is anticipated that one locomotive per week would deliver up to 10 rail cars to the site.

Offroad Operational Sources

The Project would require the use of up to three propane-powered forklifts and a tractor loader up to three months out of the year during operations.

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7.0 AIR QUALITY IMPACT ANALYSIS

This section calculates the expected emissions from construction and operation of the proposed project as a necessary requisite for assessing the regulatory significance of proposed Project emissions on a regional and localized level.

7.1 CEQA GUIDELINES

According to the CEQA Guidelines' Appendix G Environmental Checklist, the following questions are analyzed and evaluated to determine whether impacts to air quality are significant environmental effects.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the Project:

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) affecting a substantial number of people?

7.1.1 Thresholds of Significance

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the SJVAPCD recommends that its quantitative air pollution thresholds (shown in Table 14) be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts.

Table 14 SJVAPCD Significance Thresholds

Pollutant	Significance Threshold	
	Construction Emissions (tons/year)	Operational Emission (tons/year)
CO	100	100
NO_X	10	10
ROGs	10	10
SO_X	27	27
PM10	15	15
PM2.5	15	15

Source: SJVAPCD 2015

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

7.2 AIR IMPACT ANALYSIS

Impact AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project conform to the assumptions in the AQPs?
3. Will the project comply with applicable control measures in the AQPs?

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

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

AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the SJVAB can reach attainment for the ambient air quality standards. To show attainment of the standards, the SJVAPCD analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and adopted emissions controls. The SJVAPCD then formulates a control strategy to reach attainment that includes both State and SJVAPCD regulations and other local programs and measures. The applicable AQPs include the 2016 8-Hour Ozone Plan which contains measures to achieve reductions in emissions of ozone precursors and sets plans towards attainment of ambient ozone standards by 2031 and the 2018, 2016, 2015, 2012, and 2008 PM2.5 Plans to address multiple PM2.5 air quality standards and attainment deadlines.

Contribution to Air Quality Violations

A measure of determining if the Project is consistent with the air quality plans is if the Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Because of the region's nonattainment status for ozone, PM2.5, and PM10, if Project-generated emissions of either of the ozone precursor pollutants (ROG and NO_x), PM10, or PM2.5 would exceed the SJVAPCD's significance thresholds, then the Project would be considered to conflict with the attainment plans.

As shown in Impact AIR-2, emissions of ROG, NOX, PM10, and PM2.5 from construction and operation of the Project would not exceed the SJVAPCD's significance thresholds. As shown in Impact AIR-3, the Project would not result in CO hotspots that

would violate CO standards. Therefore, the Project would not contribute to air quality violations.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQPs' assumptions is determining consistency with the applicable General Plan to ensure that the project's population density and land use are consistent with the growth assumptions used in the AQPs for the SJVAB.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth and designates locations for land uses to regulate growth. The Kings County Association of Governments (KCAG) uses the growth projections and land use information in adopted general plans, among other sources, to estimate future average daily trips and then vehicle miles traveled (VMT), which are then provided to the SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQPs are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards based on these growth and emission estimates.

The applicable General Plan for the project is the City of Lemoore General Plan, which was adopted in 2008, prior to the SJVAPCD's adoption of the applicable AQPs. The Project is consistent with the General Plan land use designation of light industrial and would not contribute to unplanned growth, therefore it would be consistent with the modeling used to prepare the AQPs. The impact would be less than significant.

Control Measures

The AQP contains several control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this Project is provided in the Regulatory Setting. The Project would comply with all applicable SJVAPCD rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

Conclusion

The Project would not conflict with or obstruct implementation of the applicable AQPs.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None are required.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact AIR-2	**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?**

Impact Analysis

To result in a less than significant impact, the following criteria must be true:

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

Step 1: Regional Analysis

Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the Project's criteria pollutant emissions in comparison to SJVAPCD thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from Project construction and operation are also assessed using concentration-based thresholds that determine if the Project would result in a localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance.

The primary pollutants of concern during Project construction and operation are ROG, NO_x, PM10, and PM2.5. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for ROG and NO_x; SO_X, CO, PM10, and PM2.5.

Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The SJVAB often exceeds the state and national ozone standards. Therefore, if the Project emits a substantial quantity of ozone precursors, the Project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality standards for PM10, and PM2.5; therefore, substantial Project emissions may contribute to an exceedance for these pollutants. The SJVAPCD's annual emission significance thresholds used for the Project define substantial contribution both operational and construction emissions are provided in Table 14.

Construction Emissions

Construction emissions associated with the Project are shown in Table 15. For assumptions in estimating the emissions, please refer to Modeling Parameters and Assumptions. As shown in Table 15, the emissions are below the significance thresholds and, therefore, are less than significant on a Project basis.

Table 15: Construction Emissions – Unmitigated

Project Component Year	Emissions (Tons/Year)				
	ROG	NOx	CO	PM10	PM2.5
Phase 1 (2022)	0.22	2.20	2.23	0.56	0.29
Phase 1 (2023)	0.03	0.29	0.36	0.03	0.01
Phase 2 (2025)	0.14	1.32	1.87	0.24	0.13
Phase 2 (2026)	0.02	0.17	0.25	0.01	0.008
Significance Thresholds	10	10	100	15	15
Any Year Exceed Significance Thresholds?	No	No	No	No	No

Notes:

Source: Stantec Consulting Services, Inc., CalEEMod 2016.3.2

Operations

Operational emissions occur over the lifetime of the Project and are from two main sources: area sources and motor vehicles, or mobile sources. Operational emissions are shown in Table 16. The SJVAPCD considers construction and operational emissions separately when making significance determinations; however, it is important to note that the operational emissions in 2023 and in 2026 combined with the construction emissions would not exceed the SJVAPCD thresholds of significance.

For assumptions in estimating the emissions, please refer to Section 4, Modeling Parameters and Assumptions. The SJVAPCD also considers stationary sources separate from nonstationary sources, however, as shown below the combined emissions would not exceed the SJVAPCD thresholds of significance. As shown in Table 16, the operational emissions would be less than the thresholds of significance for all criteria air pollutants. The impact is less than significant.

Table 16: Operational Emissions - Unmitigated

Component	Source	Emissions (tons/year)				
		ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1	Area	0.46	<0.0001	<0.0001	0.00	0.00
	Energy	0.01	0.10	0.09	0.008	0.008
	Mobile	0.08	2.06	0.67	0.39	0.11
	Offroad	0.02	0.21	0.25	0.01	0.01
	Stationary	0.005	0.01	0.09	0.007	0.007
	Rail	0.06	1.00	0.11	0.03	0.03
	2023 Total	0.64	3.38	1.21	0.45	0.17
Buildout	Area	0.67	<0.0001	0.001	0	0
	Energy	0.02	0.15	0.13	0.01	0.01
	Mobile	0.12	2.95	0.94	0.58	0.16
	Offroad	0.02	0.19	0.25	0.009	0.009
	Stationary	0.005	0.01	0.09	0.007	0.007
	Rail	0.12	2	0.22	0.06	0.06
	2026 Total	0.96	5.30	1.63	0.67	0.25
Significance Thresholds		10	10	100	15	15
Exceed Significance Thresholds?		No	No	No	No	No

Notes:

All emissions except Rail were quantified using CalEEMod, version 2016.3.2 based on project details and estimated operating year for the proposed project.

Rail emissions were estimated based on one locomotive per week, current unload time is 10 minutes, the analysis used 30 minutes to provide a worst-case scenario.

Operational emissions are not anticipated to increase substantially after completion of Phase 2, but to provide a conservative estimate, mobile trips were increased by 50 percent, rail emissions were doubled to evaluate a worst-case of two locomotives per week. Area and Energy emissions at buildout were based on the total square footage.

Offroad and Stationary equipment were not anticipated to increase.

Totals may not sum due to rounding.

Source: Stantec Consulting Services Inc., CalEEMod 2016.3.2. US EPA 2009.

It should be noted that the emissions estimate is presenting the Project operational emissions as “new” emissions, however there are existing emissions associated with ongoing operations for the existing facilities, which will be consolidated to the Lemoore location. The emissions presented are conservative.

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The SJVAB is in nonattainment for PM10, PM2.5, and ozone. Therefore, if the Project exceeds the regional thresholds for PM10, or PM2.5, then it contributes to a cumulatively considerable impact for those pollutants. If the Project exceeds the regional threshold for NO_X or ROG, then it follows that the Project would contribute to a cumulatively considerable impact for ozone.

The criteria pollutant emissions analysis, as shown in above, assessed whether the Project would exceed the SJVAPCD’s thresholds of significance. As shown in Table 15 and Table 16, criteria pollutant emissions would not exceed any threshold of significance during Project construction or operation. Therefore, the combination of unmitigated Project emissions with the criteria pollutants from other sources within the SJVAB would not cumulatively contribute to a significant impact according to this criterion.

Step 2: Plan Approach

Section 15130(b) of the CEQA Guidelines states the following:

The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects

producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. The SJVAB is in nonattainment for ozone and particulate matter (PM_{10} and $PM_{2.5}$), which means that concentrations of these pollutants currently exceed the applicable ambient air quality standards.

Cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The geographic scope for cumulative criteria pollution from air quality impacts is the SJVAB, because that is the area in which the air pollutants generated by the sources within the SJVAB circulate and are often trapped. The SJVAPCD is required to prepare and maintain air quality attainment plans and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SJVAPCD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning would help the SJVAB achieve clean air mandates. The SJVAPCD evaluated emissions from land uses and transportation in the entire SJVAB when it developed its attainment plans.

In accordance with CEQA Guidelines Section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the Project complies with the requirements in a previously approved plan or mitigation program.

As discussed in impact AIR-1, the project is consistent with all applicable control measures in the air quality attainment plans. The Project would be required to comply with any SJVAPCD rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with control measures and regulations.

Step 3: Cumulative Health Impacts

The SJVAB is in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects.

The regional analysis of construction and operational emissions, as shown above indicates that the Project would not exceed the SJVAPCD's significance thresholds and the Project is consistent with the applicable AQPs. Therefore, the Project would not result in significant cumulative health impacts from nonattainment pollutants and impacts would be less than significant.

Conclusion

The proposed Project would not 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.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None are required.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact AIR-3	**Expose sensitive receptors to substantial pollutant concentrations?**

Impact Analysis

This discussion addresses whether the proposed Project would expose sensitive receptors to Naturally Occurring Asbestos (NOA), construction-generated fugitive dust (PM_{10}), ROG, NO_X, $PM_{2.5}$, Valley Fever, and construction generated DPM. A sensitive receptor is a person in a population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses (sensitive sites) where sensitive receptors are typically located:

- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes
- Residences
- Schools, playgrounds and childcare centers

The proposed Project is not considered a sensitive receptor. The nearest sensitive receptor is West Hills College located 912 feet south of the project site; the nearest residential receptor is the single-family residence located 2,700 feet east of the project site

Localized Impacts

Emissions occurring at or near the Project have the potential to create a localized impact also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. The pollutants of concern for localized impact in the SJVAB are NO_2 and CO.

The SJVAPCD has provided guidance for screening localized impacts in the GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant, then ambient air quality modeling would be necessary. If the Project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

Construction: Localized Concentrations of PM10, PM2.5, CO, and NO_2

Local construction impacts would be short-term in nature lasting only during the duration of construction. Because of the short duration and limited amount of construction anticipated for the Project, application of best management practices through compliance with Regulation VIII Fugitive Dust Prohibitions to minimize construction emissions, and levels of emissions less than the SJVAPCD's emission significance thresholds, localized construction concentrations are considered less than significant. It should also be noted that the on-site construction emissions would be less than 100 pounds per day for each of the criteria pollutants, as shown in Table 17 below. Based on the SJVAPCD's guidance the construction emissions would not cause an ambient air quality standard violation. Impacts would be less than significant.

Table 17: Localized Pollutant Concentrations for Construction - Unmitigated

Project Component Year	Emissions (Pounds per day)				
	ROG	NOx	CO	PM10	PM2.5
Phase 1 (2022)	1.67	16.67	16.89	4.24	2.20
Phase 1 (2023)	1.20	11.60	14.40	1.20	0.40
Phase 2 (2025)	1.06	10	14.17	1.82	0.98
Phase 2 (2026)	1.33	11.33	16.67	0.67	0.53
Significance Thresholds	100	100	100	100	100
Any Year Exceed Significance Thresholds?	No	No	No	No	No

Notes:
Based on the following workdays: 2022 = 264 days 2023 = 50 days 2025 = 264 days 2026 = 30 days
Source: Stantec Consulting Services, Inc., CalEEMod 2016.3.2

Operation: Localized Concentrations of PM10, PM2.5, CO, and NO_2

Operational modeling of on-site emissions for the Project indicate that the Project would not exceed 100 pounds per day for each of the criteria pollutants, as shown in Table 12 below. Therefore, based on the SJVAPCD's guidance, the operational emissions would not cause an ambient air quality standard violation. Impacts would be less than significant.

Table 18: Localized Pollutant Concentrations for Operation - Unmitigated

Component	Source	Emissions (Pounds/day)				
		ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Phase 1	2023 Total	3.51	18.52	6.63	2.47	0.93
	2026 Total	5.26	29.04	8.93	3.67	1.37
Significance Thresholds		100	100	100	100	100
Exceed Significance Thresholds?		No	No	No	No	No
Source: Stantec Consulting Services Inc.						

Construction

ROG

During paving operations, ROG is emitted. The amount emitted is dependent on the amount of ROG (or VOC) in the paving materials. There are three types of asphalt that are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, SJVAPCD Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of 3 percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Sensitive receptors are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to sensitive receptors from ROG during construction is less than significant.

Naturally-Occurring Asbestos

According to a map of areas where naturally occurring asbestos in California are likely to occur (U.S. Geological Survey 2011), there are no such areas in the Project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant.

Fugitive Dust (PM10)

PM10 emissions would not exceed the thresholds of significance, nevertheless, the potential for localized PM10 health impacts are a concern, however, the Project would comply with the SJVAPCD's Regulation VIII incorporating Best Management Practices for reducing fugitive dust, thus potential impacts are reduced to a less than significant level.

Valley Fever

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

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The Project will minimize the generation of fugitive dust during construction activities by complying with the SJVAPCD's Regulation VIII. Therefore, this regulation would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the Project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the Project from generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Diesel Particulate Matter

Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road, heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. However, construction is temporary and occurs over a relatively short duration. Operation of construction equipment is regulated by federal, state, and local regulations, including CARB and SJVAPCD rules and regulations, and occurring intermittently throughout the course of a day, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. It is not anticipated that the proposed Project would expose sensitive receptors to substantial pollutant concentrations and impacts would be considered less than significant.

Operations

ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across the roadways and in the air. The concentrations would not be great enough to result in direct health effects.

Toxic Air Contaminants

The CARB Air Quality and Land Use Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (CARB 2005), including recommendations for distances between sensitive receptors and certain land uses. The proposed Project is not identified as a land use of concern by CARB and is not located within the screening distances for sources of toxic air contaminants.

Conclusion

Sensitive receptors would not be exposed to substantial pollutant concentrations.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None are required.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact AIR-4	**Result in other emissions (such as those leading to odors) affecting a substantial number of people?**

Impact Analysis

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest sensitive receptor in the vicinity of the proposed Project site would be the students and faculty at West Hills College, approximately 912 feet south of the Project site, the nearest residential receptor would be the single-family residence located 2,700 feet east of the Project site.

Construction activities associated with the proposed Project could result in short-term odorous emissions from diesel exhaust associated with construction equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. In addition, this diesel-powered equipment would only be present on site

temporarily during construction activities. Therefore, construction would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. Although the project would store organic liquids, the storage vessels and transfer of materials would be subject to SJVAPCD rules limiting fugitive releases. The proposed Project does not contain land uses typically associated with emitting objectionable odors and is not located within the screening distances to sources of odors recommended by the SJVAPCD. Therefore, the impact would be less than significant.

Conclusion

The proposed Project would not create objectionable odors affecting a substantial number of people.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less Than Significant Impact.

8.0 GREENHOUSE GAS IMPACT ANALYSIS

Impact GHG-1	**Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Impact Analysis

Methodology for Analysis

Under CEQA, establishing significance thresholds is at the discretion of the lead agency. Outside of adopting their own thresholds, lead agencies often look to guidance provided by expert resource agencies such as the CARB or the applicable air pollution control district (APCD) or air quality management district (AQMD) whose purpose is to provide technical guidance on the resources they oversee. Many APCDs and AQMDs provide guidance on the assessment of air quality and GHG emissions and their potential for significant impacts and also provide recommendations for mitigating impacts.

The proposed Project falls within the jurisdiction of the SJVAPCD. The SJVAPCD guidance on determining impact significance recommends three conditions in which a project's impacts would be less than significant:

1. If the project complies with an approved GHG reduction plan:

Climate Action Plans (CAPs) are typically the most applicable GHG reduction plans to the SJVAPCD criteria. The City of Lemoore does not have an adopted CAP.

2. If the project implements Best Performance Standards (BPS):

The second criteria for evaluating significance, BPS, is intended for stationary sources and development projects. The SJVAPCD has established BPS for certain stationary sources and has provided draft BPS for development projects but not for an industrial type of project, thus BPS standards would not apply. The Project would implement BPS for its boilers as part of the permitting process.

3. The project reduces operational GHG emissions by at least 29 percent over BAU conditions (demonstrated quantitatively).

The final criteria, BAU, calls for an assessment of the statewide GHG emissions reduction from the BAU emission condition. In other words, an assessment of the

reduction of GHG emissions at a future date that would be based on a percentage decrease of historic GHG levels (typically levels in the year 1990). Establishing the methodology for determining what BAU conditions and targets should be has been the subject of recent legislation and legal proceedings and is currently still unsettled. Both AB 32 (achieve 1990 GHG levels by 2020) and SB 32 goals (40 percent below 1990 GHG levels by 2030), EO S-3-05 (80 percent below 1990 GHG levels by 2050), and the legal proceedings surrounding assessments based on their standards have brought to light the validity of applying statewide efficiency-based thresholds to project-level impact evaluations.

The Newhall Ranch (*Center For Biological Diversity, et al. v. California Department of Fish and Wildlife* [The Newhall Land and Farming Company, Real Party in Interest] [2015] 62 Cal.4th 204) decision affirmed that "thresholds only define the level at which an environmental effect 'normally' is considered significant; they do not relieve the lead agency of its duty to determine the significance of an impact independently." The Court went on in the decision to suggest approaches in which the lead agency could undertake to establish significance thresholds. Of the recommended approaches, establishment of a quantitative threshold is the most applicable to assessment of the Project's impacts.

Establishment of Quantitative Thresholds

These quantitative thresholds can be established by APCDs and AQMDs based on best available data to determine quantitative values in which emissions beyond that value would result in a significant impact within their jurisdiction. To date, SJVAPCD has not adopted quantitative thresholds, so the City looked to nearby and similarly situated air districts to identify quantitative thresholds that would best evaluate the potential significance of the Program GHG emissions. A review of air districts with established quantitative thresholds shown in Table 19 identified that a stationary source threshold would be most applicable to the Project since it is an industrial project. The East Kern Air Pollution Control District would be most like the Project area. It should be noted that the 25,000 $MTCO_2e$ was based on achieving 2020 targets, therefore the 25,000 $MTCO_2e$ threshold was reduced by 40 percent to reflect achieving 2030 GHG targets.

Table 19: Adopted GHG CEQA Quantitative Significance Thresholds in California

Agency	Construction Threshold ($MTCO_2e$)	Operational Threshold ($MTCO_2e$)
Bay Area Air Quality Management District	N/A	Project: 1,100 Stationary: 10,000
East Kern Air Pollution Control District	N/A	Stationary: 25,000
Monterey Bay Unified Air Pollution Control District	N/A	Stationary: 25,000
Mojave Desert Air Quality Management District	100,000	100,000
Antelope Valley Air Quality Management District	100,000	100,000
Santa Barbara County Air Pollution Control District	N/A	Stationary: 10,000
San Luis Obispo Air Pollution Control District	N/A	Project: 1,150 Stationary: 10,000
South Coast Air Quality Management District	N/A	Commercial Project: 1,400 Mixed Use Project: 3,000 Residential Project: 3,500 Stationary: 10,000
Sacramento Metropolitan Air Quality Management District	1,100[1]	Project: 1,100 Stationary: 10,000

Notes:

1. SMAQMD states in its CEQA guidance that "Lead agencies may decide to amortize the level of short-term construction emissions over the expected (long-term) operational life of a project."

Key:

$MTCO_2e$ = million tons of carbon dioxide equivalent

N/A = not applicable

The EKAPCD numerical threshold may be viewed as an acceptable CEQA assessment tool by SJVAPCD considering their absence of a recommended threshold. The 15,000 $MTCO_2e$ threshold is used to determine the Project's potential to generate GHG emissions that may have a significant impact on the environment or conflict with an applicable GHG plan, policy, or regulation.

Additionally, the Project's compliance with applicable measures from the the AB 32 Scoping Plan, and the 2017 Scoping Plan Update (SB 32 target year) would be used to determine potential conflicts with GHG reduction plans.

Construction

Greenhouse gas emissions generated during all phases of construction were combined and are shown in Table 20. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions, however, other jurisdictions such as the South Coast Air Quality Management District (SCAQMD) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. The SCAQMD and SMAQMD recommend that construction emissions be amortized based on the life of the project (commercial projects – 20 years) and added to the operational emissions.

Table 20: Construction Greenhouse Gas Emissions

Construction Activity	$MTCO_{2e}$
2022	439
2023	66
2025	298
2026	39
Total	842
Amortized over 20 years[1]	42

Notes:
1. GHG emissions are amortized over the 20-year life of the proposed Project.
Source: Stantec Consulting Services Inc., CalEEMod 2016.3.2

Operation

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Additionally, the project's offroad operational equipment and stationary sources were included in the estimate. Table 21 provides a summary of the Project's GHG emissions. Total GHG emissions would be 2,494 $MTCO_2e$, which would be well under the 15,000 $MTCO_2e$ threshold; the impact would be less than significant.

Table 21: Operational Greenhouse Gas Emissions

Component	Source	Emissions (metric tons/year)
		CO2e
Buildout	2026 Total	2,452
	Amortized Construction Emissions	42
	Total	2,494
Threshold		15,000
Exceed Significance Thresholds?		No

As discussed previously under the air quality impact assessment, the estimated emissions provide a conservative estimate as the analysis shows all the operational emissions as "new" emissions, but there are existing operational emissions associated with current operations at the existing facilities. Thus, actual GHG emissions would likely be lower.

Impact GHG-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis

SJVAPCD Climate Change Action Plan

The SJVAPCD has adopted a CCAP, which includes suggested BPS for proposed non-residential development projects. Appendix J of the SJVAPCD Final Staff Report for the CCAP contains GHG reduction measures that are recommended by the SJVAPCD, however none of the measures would be applicable to the proposed Project.

CARB Scoping Plan

There are no other local or regional Climate Action Plans applicable to the proposed project, therefore, the proposed project was evaluated for consistency against the CARB 2017 Scoping Plan. Table 22 provides a summary of the consistency determination.

Table 22: Consistency with SB 32 2017 Scoping Plan Update

Measure Name	Measure Description	Consistency Determination
SB 350 50% Renewable Mandate.	Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent.** The proposed project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
Low Carbon Fuel Standard	This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent.** Vehicles accessing the proposed project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent.** Employees can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy	The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent.** The project is not a source of SLCPs.
SB 375 Sustainable Communities Strategies	Requires Regional Transportation Plans to include a sustainable communities' strategy for reduction of per capita vehicle miles traveled.	**Not Applicable.** The proposed project does not include housing but would help provide additional jobs in the City to help balance the jobs to housing ratio. The proposed Project would also not result in unanticipated growth as it is consistent with the applicable General Plan.
Post-2020 Cap-and-Trade Program	The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap- and-Trade Program. The Cap-and-Trade Program also covers

		fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Source of Measures: CARB, 2017 Source of Consistency Determination: Stantec Consulting Services Inc, 2019		

As demonstrated above, the proposed project would be consistent with applicable measures in the State's Scoping Plan. As discussed in impact GHG-1, the proposed project does not exceed the quantitative threshold of 15,000 $MTCO_2e$.

Conclusion

The proposed project would not conflict with the goals and objectives of the SJVAPCD's CCAP, with CARB's 2017 Scoping Plan, or any other State or regional plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. As such, the proposed project would not conflict with an applicable plan; therefore, impacts would be considered less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less Than Significant Impact.

9.0 ENERGY

Impact Analysis

This section discusses potential energy impacts associated with the proposed project and provides mitigation measures where necessary.

Impact ENERGY-1	**Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

Methodology

The energy requirements for the proposed project were determined using the construction and operational estimates generated from the Methodology and Modeling Assumptions (refer to Section 6.3). The calculation worksheets for diesel fuel consumption rates for off-road construction equipment and on-road vehicles are provided in Appendix B. Short-term construction energy consumption is discussed below.

This impact addresses the energy consumption from both the short-term construction and long-term operations are discussed separately below.

Short-Term Construction

The proposed project is anticipated to be constructed in two phases beginning in 2022 with completion in 2026. Table 23 provides and estimate of the project's energy use during construction. The first phase of construction is anticipated to use 9,091 gallons of gasoline and diesel fuel for the construction worker onroad vehicles and 33,345 gallons of diesel fuel for the offroad construction equipment. The second phase of construction is anticipated to use 4,210 gallons of gasoline and diesel fuel for the construction worker onroad vehicles and 28,654 gallons of diesel fuel for the offroad construction equipment.

There are no unusual project characteristics that would necessitate the use of construction vehicles or equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Table 23: Summary of Energy Use During Construction (Annual)

Component	Source	Energy Use
Phase 1	Construction worker vehicle fuel	9,091 gallons (gasoline, diesel)
	Construction offroad equipment fuel	33,345 gallons (diesel)
Phase 2	Construction worker vehicle fuel	4,210 gallons (gasoline, diesel)
	Construction offroad equipment fuel	28,654 gallons (diesel)
Total		75,301 gallons (gasoline, diesel)

Source: Stantec 2021

Long-Term Operations

Table 24 provides an estimate of the long-term energy use associated with the project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed project.

Table 24: Summary of Energy Use During Operation (Annual)

Source	Energy Use
Operational vehicle fuel consumption	139,137 gallons (gasoline, diesel)
Operational natural gas consumption	5,344,760 kilo-British Thermal Units
Operational electrical consumption	1,285,070 kilowatt hours

Source: Stantec 2021

Annual consumption is estimated at 139,137 gallons. The proposed project would consolidate existing operations and constitute development within an established community. As such, it would not be opening a new geographical area for development, nor would it result in a substantial number of new trips or substantially lengthen existing trips.

Buildings constructed pursuant to the proposed Project would comply with the versions of CCR Titles 20 and 24, including California Green Building Standards (CALGreen), that are applicable at the time that building permits are issued. The proposed project is estimated to demand 1,285,070 kilowatt hours of electricity per year and 5,344,760 kilo-British Thermal Units of natural gas per year. This would represent an increase in demand for electricity and natural gas.

It would be expected that building energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the region. Current state regulatory requirements for new building construction contained in the 2019 CALGreen and Title 24 standards would increase energy efficiency and reduce energy demand in comparison to existing commercial structures, and therefore would reduce actual environmental effects associated with energy use from the proposed project. Additionally, the CALGreen and Title 24 standards have increased efficiency standards through each update.

Therefore, while the proposed project would result in increased electricity and natural gas demand, the electricity and natural gas would be consumed more efficiently and would be typical of residential development. Compliance with future building code standards would result in increased energy efficiency.

For the above reasons, energy impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact ENERGY-2	**Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

There is no state plan for energy efficiency, however, there are existing regulations under CCR Titles 20 and 24, including CALGreen. There is no applicable local plan for renewable energy or energy efficiency. The City has addressed energy use in buildings and other structures by promoting energy conservation through various General Plan policies. For example, the City will require new developments to use different techniques to improve energy efficiency, including building/site orientation and construction, articulated windows, roof overhangs, appropriate building and insulation materials and techniques, and other architectural features that improve passive interior climate control. The City will also encourage landscaping methods, materials, and designs that promote energy conservation and will preserve existing trees and plant new trees along streetscapes to provide shade.

The proposed project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued and with all applicable City measures.

The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency through adherence to state regulatory measures and City General Plan policies; impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less Than Significant Impact.

10.0 REFERENCES

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February 26, 2021

APPENDIX A: CALEEMOD RESULTS

Helena Agri-Enterprises Phase 1

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	99.70	1000sqft	31.14	99,700.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - PD - Truck/Tank Rinse Pad, Office, Shop, Warehouse, Tank Containment, Fertilizer Warehouse
User Defined Industrial - set at 1 - to evaluate truck deliveries

Construction Phase - Project Applicant provided schedule

Off-road Equipment - Project Applicant provided information

Trips and VMT - Applicant provided information, used higher value compared to default.
5 trucks x 2 trips = 10 for each phase -mob/demob
Addtitional trucks based on concrete import and soil import

Vehicle Trips - TIS Employees = 68 ADT M-F, divided by 99.7ksf = 0.683 trips per ksf
TIS Employees = 50 ADT Sat, divided by 99.7 ksf = 0.502
Trucks = 70 ADT M-F and 52 ADT Saturday

Fleet Mix - Adjusted fleet mix for employee vehicles and included separate line item for heavy duty trucks

Operational Off-Road Equipment - Project Applicant provided information

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

Water And Wastewater - Applicant provided information

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	500.00	260.00
tblConstructionPhase	NumDays	45.00	36.00
tblConstructionPhase	NumDays	35.00	10.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	PhaseEndDate	3/1/2024	2/23/2023
tblConstructionPhase	PhaseEndDate	4/1/2022	2/24/2022
tblConstructionPhase	PhaseEndDate	4/19/2024	3/9/2023
tblConstructionPhase	PhaseEndDate	1/28/2022	1/5/2022
tblConstructionPhase	PhaseStartDate	4/2/2022	2/25/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/6/2022
tblConstructionPhase	PhaseStartDate	3/2/2024	2/24/2023
tblFleetMix	HHD	0.17	0.00
tblFleetMix	HHD	0.17	1.00
tblFleetMix	LDA	0.51	0.63
tblFleetMix	LDA	0.51	0.00
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT1	0.03	0.00
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LDT2	0.15	0.00
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	4.0800e-003	5.0210e-003

tblFleetMix	LHD2	4.0800e-003	0.00
tblFleetMix	MCY	5.4520e-003	0.00
tblFleetMix	MCY	5.4520e-003	0.00
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.00
tblFleetMix	MH	6.1300e-004	0.00
tblFleetMix	MH	6.1300e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.6890e-003	0.00
tblFleetMix	OBUS	1.6890e-003	0.00
tblFleetMix	SBUS	9.0400e-004	0.00
tblFleetMix	SBUS	9.0400e-004	0.00
tblFleetMix	UBUS	1.6060e-003	0.00
tblFleetMix	UBUS	1.6060e-003	0.00
tblLandUse	LotAcreage	2.29	31.14
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	UsageHours	7.00	1.08
tblOffRoadEquipment	UsageHours	8.00	1.23
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	72.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblStationaryBoilersUse	AnnualHeatInput	0.00	1,920.00
tblStationaryBoilersUse	BoilerRatingValue	0.00	2.00
tblStationaryBoilersUse	DailyHeatInput	0.00	16.00
tblStationaryBoilersUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	510.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,195.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	14.70	30.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.49	0.50
tblVehicleTrips	ST_TR	0.00	52.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	WD_TR	3.82	0.68
tblVehicleTrips	WD_TR	0.00	70.00
tblWater	IndoorWaterUseRate	23,055,625.00	1,000,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2229	2.1950	2.2347	4.9000e-003	0.4646	0.0937	0.5583	0.2042	0.0876	0.2918	0.0000	437.0625	437.0625	0.0856	0.0000	439.2026
2023	0.0311	0.2857	0.3602	7.4000e-004	0.0212	0.0127	0.0339	5.5600e-003	0.0119	0.0174	0.0000	65.5317	65.5317	0.0118	0.0000	65.8268
Maximum	**0.2229**	**2.1950**	**2.2347**	**4.9000e-003**	**0.4646**	**0.0937**	**0.5583**	**0.2042**	**0.0876**	**0.2918**	**0.0000**	**437.0625**	**437.0625**	**0.0856**	**0.0000**	**439.2026**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2229	2.1950	2.2347	4.9000e-003	0.4646	0.0937	0.5583	0.2042	0.0876	0.2918	0.0000	437.0622	437.0622	0.0856	0.0000	439.2022
2023	0.0311	0.2857	0.3602	7.4000e-004	0.0212	0.0127	0.0339	5.5600e-003	0.0119	0.0174	0.0000	65.5316	65.5316	0.0118	0.0000	65.8268
Maximum	**0.2229**	**2.1950**	**2.2347**	**4.9000e-003**	**0.4646**	**0.0937**	**0.5583**	**0.2042**	**0.0876**	**0.2918**	**0.0000**	**437.0622**	**437.0622**	**0.0856**	**0.0000**	**439.2022**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.8831	0.8831
2	4-3-2022	7-2-2022	0.5071	0.5071
3	7-3-2022	10-2-2022	0.5127	0.5127
4	10-3-2022	1-2-2023	0.5136	0.5136
5	1-3-2023	4-2-2023	0.3046	0.3046
		Highest	0.8831	0.8831

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4588	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003
Energy	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	366.8503	366.8503	0.0137	4.4300e-003	368.5125
Mobile	0.0820	2.0571	0.6662	0.0120	0.3807	4.8200e-003	0.3855	0.1036	4.5900e-003	0.1082	0.0000	1,137.3110	1,137.3110	0.0434	0.0000	1,138.3965
Offroad	0.0229	0.2142	0.2491	4.1000e-004		0.0114	0.0114		0.0104	0.0104	0.0000	36.0744	36.0744	0.0117	0.0000	36.3661
Stationary	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4602	102.4602	1.9600e-003	0.0000	102.5093
Waste						0.0000	0.0000		0.0000	0.0000	25.0958	0.0000	25.0958	1.4831	0.0000	62.1737
Water						0.0000	0.0000		0.0000	0.0000	0.3173	1.5741	1.8914	0.0327	7.8000e-004	2.9415
Total	**0.5801**	**2.3839**	**1.0941**	**0.0136**	**0.3807**	**0.0311**	**0.4117**	**0.1036**	**0.0299**	**0.1336**	**25.4130**	**1,644.2720**	**1,669.6850**	**1.5865**	**5.2100e-003**	**1,710.9016**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4588	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003
Energy	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	366.8503	366.8503	0.0137	4.4300e-003	368.5125
Mobile	0.0820	2.0571	0.6662	0.0120	0.3807	4.8200e-003	0.3855	0.1036	4.5900e-003	0.1082	0.0000	1,137.3110	1,137.3110	0.0434	0.0000	1,138.3965
Offroad	0.0229	0.2142	0.2491	4.1000e-004		0.0114	0.0114		0.0104	0.0104	0.0000	36.0744	36.0744	0.0117	0.0000	36.3661
Stationary	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4602	102.4602	1.9600e-003	0.0000	102.5093
Waste						0.0000	0.0000		0.0000	0.0000	25.0958	0.0000	25.0958	1.4831	0.0000	62.1737
Water						0.0000	0.0000		0.0000	0.0000	0.3173	1.5741	1.8914	0.0327	7.8000e-004	2.9415
Total	**0.5801**	**2.3839**	**1.0941**	**0.0136**	**0.3807**	**0.0311**	**0.4117**	**0.1036**	**0.0299**	**0.1336**	**25.4130**	**1,644.2720**	**1,669.6850**	**1.5865**	**5.2100e-003**	**1,710.9016**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/3/2022	1/5/2022	5	3	
2	Grading	Grading	1/6/2022	2/24/2022	5	36	
3	Building Construction	Building Construction	2/25/2022	2/23/2023	5	260	
4	Paving	Paving	2/24/2023	3/9/2023	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	1.08	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	1.23	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Site Preparation	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	20.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	24.00	0.00	510.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	42.00	16.00	1,195.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7200e-003	0.0295	0.0226	5.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	4.4314	4.4314	1.4300e-003	0.0000	4.4672
Total	**2.7200e-003**	**0.0295**	**0.0226**	**5.0000e-005**	**0.1807**	**1.1900e-003**	**0.1819**	**0.0993**	**1.0900e-003**	**0.1004**	**0.0000**	**4.4314**	**4.4314**	**1.4300e-003**	**0.0000**	**4.4672**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.1700e-003	1.8000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3713	0.3713	3.0000e-005	0.0000	0.3720
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2945
Total	**2.0000e-004**	**1.2900e-003**	**1.3400e-003**	**0.0000**	**4.6000e-004**	**0.0000**	**4.7000e-004**	**1.2000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.6656**	**0.6656**	**4.0000e-005**	**0.0000**	**0.6665**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7200e-003	0.0295	0.0226	5.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	4.4314	4.4314	1.4300e-003	0.0000	4.4672
Total	**2.7200e-003**	**0.0295**	**0.0226**	**5.0000e-005**	**0.1807**	**1.1900e-003**	**0.1819**	**0.0993**	**1.0900e-003**	**0.1004**	**0.0000**	**4.4314**	**4.4314**	**1.4300e-003**	**0.0000**	**4.4672**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.1700e-003	1.8000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3713	0.3713	3.0000e-005	0.0000	0.3720
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2945
Total	**2.0000e-004**	**1.2900e-003**	**1.3400e-003**	**0.0000**	**4.6000e-004**	**0.0000**	**4.7000e-004**	**1.2000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.6656**	**0.6656**	**4.0000e-005**	**0.0000**	**0.6665**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1952	0.0000	0.1952	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0502	0.5409	0.4583	9.6000e-004		0.0219	0.0219		0.0202	0.0202	0.0000	84.6574	84.6574	0.0274	0.0000	85.3419
Total	**0.0502**	**0.5409**	**0.4583**	**9.6000e-004**	**0.1952**	**0.0219**	**0.2171**	**0.0809**	**0.0202**	**0.1011**	**0.0000**	**84.6574**	**84.6574**	**0.0274**	**0.0000**	**85.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8100e-003	0.0598	9.0400e-003	2.0000e-004	4.3900e-003	1.8000e-004	4.5700e-003	1.2100e-003	1.7000e-004	1.3800e-003	0.0000	18.9373	18.9373	1.4500e-003	0.0000	18.9736
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7600e-003	0.0168	5.0000e-005	5.4000e-003	3.0000e-005	5.4300e-003	1.4300e-003	3.0000e-005	1.4600e-003	0.0000	4.2377	4.2377	1.3000e-004	0.0000	4.2409
Total	**4.1000e-003**	**0.0615**	**0.0258**	**2.5000e-004**	**9.7900e-003**	**2.1000e-004**	**0.0100**	**2.6400e-003**	**2.0000e-004**	**2.8400e-003**	**0.0000**	**23.1749**	**23.1749**	**1.5800e-003**	**0.0000**	**23.2145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1952	0.0000	0.1952	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0502	0.5409	0.4583	9.6000e-004		0.0219	0.0219		0.0202	0.0202	0.0000	84.6573	84.6573	0.0274	0.0000	85.3418
Total	**0.0502**	**0.5409**	**0.4583**	**9.6000e-004**	**0.1952**	**0.0219**	**0.2171**	**0.0809**	**0.0202**	**0.1011**	**0.0000**	**84.6573**	**84.6573**	**0.0274**	**0.0000**	**85.3418**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8100e-003	0.0598	9.0400e-003	2.0000e-004	4.3900e-003	1.8000e-004	4.5700e-003	1.2100e-003	1.7000e-004	1.3800e-003	0.0000	18.9373	18.9373	1.4500e-003	0.0000	18.9736
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7600e-003	0.0168	5.0000e-005	5.4000e-003	3.0000e-005	5.4300e-003	1.4300e-003	3.0000e-005	1.4600e-003	0.0000	4.2377	4.2377	1.3000e-004	0.0000	4.2409
Total	**4.1000e-003**	**0.0615**	**0.0258**	**2.5000e-004**	**9.7900e-003**	**2.1000e-004**	**0.0100**	**2.6400e-003**	**2.0000e-004**	**2.8400e-003**	**0.0000**	**23.1749**	**23.1749**	**1.5800e-003**	**0.0000**	**23.2145**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1322	1.2466	1.4948	2.2700e-003		0.0692	0.0692		0.0651	0.0651	0.0000	197.0015	197.0015	0.0458	0.0000	198.1472
Total	**0.1322**	**1.2466**	**1.4948**	**2.2700e-003**		**0.0692**	**0.0692**		**0.0651**	**0.0651**	**0.0000**	**197.0015**	**197.0015**	**0.0458**	**0.0000**	**198.1472**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6100e-003	0.1190	0.0180	4.0000e-004	9.8900e-003	3.6000e-004	0.0103	2.6900e-003	3.4000e-004	3.0300e-003	0.0000	37.7167	37.7167	2.9000e-003	0.0000	37.7891
Vendor	5.4000e-003	0.1773	0.0339	4.6000e-004	0.0107	4.7000e-004	0.0111	3.0800e-003	4.5000e-004	3.5300e-003	0.0000	43.8895	43.8895	5.0600e-003	0.0000	44.0161
Worker	0.0246	0.0189	0.1800	5.0000e-004	0.0580	3.5000e-004	0.0583	0.0154	3.3000e-004	0.0157	0.0000	45.5256	45.5256	1.3800e-003	0.0000	45.5601
Total	**0.0336**	**0.3152**	**0.2319**	**1.3600e-003**	**0.0785**	**1.1800e-003**	**0.0797**	**0.0212**	**1.1200e-003**	**0.0223**	**0.0000**	**127.1318**	**127.1318**	**9.3400e-003**	**0.0000**	**127.3653**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1322	1.2466	1.4948	2.2700e-003		0.0692	0.0692		0.0651	0.0651	0.0000	197.0012	197.0012	0.0458	0.0000	198.1470
Total	**0.1322**	**1.2466**	**1.4948**	**2.2700e-003**		**0.0692**	**0.0692**		**0.0651**	**0.0651**	**0.0000**	**197.0012**	**197.0012**	**0.0458**	**0.0000**	**198.1470**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6100e-003	0.1190	0.0180	4.0000e-004	9.8900e-003	3.6000e-004	0.0103	2.6900e-003	3.4000e-004	3.0300e-003	0.0000	37.7167	37.7167	2.9000e-003	0.0000	37.7891
Vendor	5.4000e-003	0.1773	0.0339	4.6000e-004	0.0107	4.7000e-004	0.0111	3.0800e-003	4.5000e-004	3.5300e-003	0.0000	43.8895	43.8895	5.0600e-003	0.0000	44.0161
Worker	0.0246	0.0189	0.1800	5.0000e-004	0.0580	3.5000e-004	0.0583	0.0154	3.3000e-004	0.0157	0.0000	45.5256	45.5256	1.3800e-003	0.0000	45.5601
Total	**0.0336**	**0.3152**	**0.2319**	**1.3600e-003**	**0.0785**	**1.1800e-003**	**0.0797**	**0.0212**	**1.1200e-003**	**0.0223**	**0.0000**	**127.1318**	**127.1318**	**9.3400e-003**	**0.0000**	**127.3653**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.2020	0.2626	4.0000e-004		0.0104	0.0104		9.8100e-003	9.8100e-003	0.0000	34.7806	34.7806	8.0500e-003	0.0000	34.9818
Total	**0.0214**	**0.2020**	**0.2626**	**4.0000e-004**		**0.0104**	**0.0104**		**9.8100e-003**	**9.8100e-003**	**0.0000**	**34.7806**	**34.7806**	**8.0500e-003**	**0.0000**	**34.9818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.3000e-004	0.0143	2.6200e-003	7.0000e-005	8.0900e-003	2.0000e-005	8.1100e-003	2.0300e-003	2.0000e-005	2.0500e-003	0.0000	6.4381	6.4381	3.4000e-004	0.0000	6.4466
Vendor	6.6000e-004	0.0238	4.9300e-003	8.0000e-005	1.8800e-003	2.0000e-005	1.9000e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	7.5596	7.5596	5.9000e-004	0.0000	7.5745
Worker	4.0300e-003	2.9800e-003	0.0288	9.0000e-005	0.0102	6.0000e-005	0.0103	2.7200e-003	6.0000e-005	2.7700e-003	0.0000	7.7370	7.7370	2.2000e-004	0.0000	7.7424
Total	**5.1200e-003**	**0.0411**	**0.0364**	**2.4000e-004**	**0.0202**	**1.0000e-004**	**0.0203**	**5.2900e-003**	**1.0000e-004**	**5.3800e-003**	**0.0000**	**21.7348**	**21.7348**	**1.1500e-003**	**0.0000**	**21.7635**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.2020	0.2626	4.0000e-004		0.0104	0.0104		9.8100e-003	9.8100e-003	0.0000	34.7806	34.7806	8.0500e-003	0.0000	34.9818
Total	**0.0214**	**0.2020**	**0.2626**	**4.0000e-004**		**0.0104**	**0.0104**		**9.8100e-003**	**9.8100e-003**	**0.0000**	**34.7806**	**34.7806**	**8.0500e-003**	**0.0000**	**34.9818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.3000e-004	0.0143	2.6200e-003	7.0000e-005	8.0900e-003	2.0000e-005	8.1100e-003	2.0300e-003	2.0000e-005	2.0500e-003	0.0000	6.4381	6.4381	3.4000e-004	0.0000	6.4466
Vendor	6.6000e-004	0.0238	4.9300e-003	8.0000e-005	1.8800e-003	2.0000e-005	1.9000e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	7.5596	7.5596	5.9000e-004	0.0000	7.5745
Worker	4.0300e-003	2.9800e-003	0.0288	9.0000e-005	0.0102	6.0000e-005	0.0103	2.7200e-003	6.0000e-005	2.7700e-003	0.0000	7.7370	7.7370	2.2000e-004	0.0000	7.7424
Total	**5.1200e-003**	**0.0411**	**0.0364**	**2.4000e-004**	**0.0202**	**1.0000e-004**	**0.0203**	**5.2900e-003**	**1.0000e-004**	**5.3800e-003**	**0.0000**	**21.7348**	**21.7348**	**1.1500e-003**	**0.0000**	**21.7635**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0415	0.0585	9.0000e-005		2.1100e-003	2.1100e-003		1.9400e-003	1.9400e-003	0.0000	7.9486	7.9486	2.5700e-003	0.0000	8.0129
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-003**	**0.0415**	**0.0585**	**9.0000e-005**		**2.1100e-003**	**2.1100e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**7.9486**	**7.9486**	**2.5700e-003**	**0.0000**	**8.0129**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.0000e-004	1.5000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3592	0.3592	2.0000e-005	0.0000	0.3596
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	2.6400e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.7085	0.7085	2.0000e-005	0.0000	0.7090
Total	**3.9000e-004**	**1.0700e-003**	**2.7900e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0300e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.0677**	**1.0677**	**4.0000e-005**	**0.0000**	**1.0687**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0415	0.0585	9.0000e-005		2.1100e-003	2.1100e-003		1.9400e-003	1.9400e-003	0.0000	7.9486	7.9486	2.5700e-003	0.0000	8.0129
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-003**	**0.0415**	**0.0585**	**9.0000e-005**		**2.1100e-003**	**2.1100e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**7.9486**	**7.9486**	**2.5700e-003**	**0.0000**	**8.0129**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.0000e-004	1.5000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3592	0.3592	2.0000e-005	0.0000	0.3596
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	2.6400e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.5000e-004	0.0000	0.7085	0.7085	2.0000e-005	0.0000	0.7090
Total	**3.9000e-004**	**1.0700e-003**	**2.7900e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0300e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.0677**	**1.0677**	**4.0000e-005**	**0.0000**	**1.0687**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0820	2.0571	0.6662	0.0120	0.3807	4.8200e-003	0.3855	0.1036	4.5900e-003	0.1082	0.0000	1,137.3110	1,137.3110	0.0434	0.0000	1,138.3965
Unmitigated	0.0820	2.0571	0.6662	0.0120	0.3807	4.8200e-003	0.3855	0.1036	4.5900e-003	0.1082	0.0000	1,137.3110	1,137.3110	0.0434	0.0000	1,138.3965

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	68.10	50.05	0.00	298,517	298,517
User Defined Industrial	70.00	52.00	0.00	627,120	627,120
Total	138.10	102.05	0.00	925,637	925,637

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	14.70	6.60	6.60	100.00	0.00	0.00	100	0	0
User Defined Industrial	30.00	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.625747	0.033345	0.185999	0.130396	0.019491	0.005021	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	255.8142	255.8142	0.0116	2.3900e-003	256.8165
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	255.8142	255.8142	0.0116	2.3900e-003	256.8165
NaturalGas Mitigated	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	111.0362	111.0362	2.1300e-003	2.0400e-003	111.6960
NaturalGas Unmitigated	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	111.0362	111.0362	2.1300e-003	2.0400e-003	111.6960

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	2.08074e+006	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	111.0362	111.0362	2.1300e-003	2.0400e-003	111.6960
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0112**	**0.1020**	**0.0857**	**6.1000e-004**		**7.7500e-003**	**7.7500e-003**		**7.7500e-003**	**7.7500e-003**	**0.0000**	**111.0362**	**111.0362**	**2.1300e-003**	**2.0400e-003**	**111.6960**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	2.08074e+006	0.0112	0.1020	0.0857	6.1000e-004		7.7500e-003	7.7500e-003		7.7500e-003	7.7500e-003	0.0000	111.0362	111.0362	2.1300e-003	2.0400e-003	111.6960
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0112**	**0.1020**	**0.0857**	**6.1000e-004**		**7.7500e-003**	**7.7500e-003**		**7.7500e-003**	**7.7500e-003**	**0.0000**	**111.0362**	**111.0362**	**2.1300e-003**	**2.0400e-003**	**111.6960**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	879354	255.8142	0.0116	2.3900e-003	256.8165
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**255.8142**	**0.0116**	**2.3900e-003**	**256.8165**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	879354	255.8142	0.0116	2.3900e-003	256.8165
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**255.8142**	**0.0116**	**2.3900e-003**	**256.8165**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4588	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003
Unmitigated	0.4588	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003
Total	**0.4588**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-003**	**1.8000e-003**	**0.0000**	**0.0000**	**1.9200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9200e-003
Total	**0.4588**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-003**	**1.8000e-003**	**0.0000**	**0.0000**	**1.9200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.8914	0.0327	7.8000e-004	2.9415
Unmitigated	1.8914	0.0327	7.8000e-004	2.9415

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1 / 0	1.8914	0.0327	7.8000e-004	2.9415
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8914**	**0.0327**	**7.8000e-004**	**2.9415**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1 / 0	1.8914	0.0327	7.8000e-004	2.9415
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8914**	**0.0327**	**7.8000e-004**	**2.9415**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	25.0958	1.4831	0.0000	62.1737
Unmitigated	25.0958	1.4831	0.0000	62.1737

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	123.63	25.0958	1.4831	0.0000	62.1737
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**25.0958**	**1.4831**	**0.0000**	**62.1737**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	123.63	25.0958	1.4831	0.0000	62.1737
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**25.0958**	**1.4831**	**0.0000**	**62.1737**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	3	4.00	260	89	0.20	CNG
Rubber Tired Loaders	1	4.00	72	203	0.36	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0184	0.1723	0.2222	3.0000e-004		9.9500e-003	9.9500e-003		9.1500e-003	9.1500e-003	0.0000	26.1868	26.1868	8.4700e-003	0.0000	26.3985
Rubber Tired Loaders	4.5700e-003	0.0419	0.0269	1.1000e-004		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	9.8876	9.8876	3.2000e-003	0.0000	9.9676
Total	**0.0229**	**0.2142**	**0.2491**	**4.1000e-004**		**0.0114**	**0.0114**		**0.0104**	**0.0104**	**0.0000**	**36.0745**	**36.0745**	**0.0117**	**0.0000**	**36.3661**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
Boiler	1	16	1920	2	CNG

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Boiler - CNG (2 - 5 MMBTU)	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4602	102.4602	1.9600e-003	0.0000	102.5093
Total	**5.1800e-003**	**0.0106**	**0.0922**	**5.6000e-004**		**7.1500e-003**	**7.1500e-003**		**7.1500e-003**	**7.1500e-003**	**0.0000**	**102.4602**	**102.4602**	**1.9600e-003**	**0.0000**	**102.5093**

11.0 Vegetation

Helena Agri-Enterprises Phase 2

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	46.00	1000sqft	15.00	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	7			**Operational Year**	2027
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - PD

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Applicant provided input

Trips and VMT - 5 trucks x 2 trips each added to each phase for mob/demob

Vehicle Trips - no increase in operations

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	260.00
tblConstructionPhase	NumDays	30.00	31.00
tblConstructionPhase	NumDays	10.00	3.00

tblLandUse	LotAcreage	1.06	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.10
tblOffRoadEquipment	UsageHours	8.00	1.20
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblVehicleTrips	ST_TR	1.49	0.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	WD_TR	3.82	0.00
tblWater	IndoorWaterUseRate	10,637,500.00	500,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1436	1.3173	1.8689	3.3700e-003	0.1815	0.0535	0.2351	0.0787	0.0502	0.1288	0.0000	296.5236	296.5236	0.0652	0.0000	298.1533
2026	0.0188	0.1736	0.2528	4.4000e-004	5.2100e-003	7.1200e-003	0.0123	1.4000e-003	6.6900e-003	8.1000e-003	0.0000	38.4995	38.4995	7.7200e-003	0.0000	38.6925
Maximum	**0.1436**	**1.3173**	**1.8689**	**3.3700e-003**	**0.1815**	**0.0535**	**0.2351**	**0.0787**	**0.0502**	**0.1288**	**0.0000**	**296.5236**	**296.5236**	**0.0652**	**0.0000**	**298.1533**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1436	1.3173	1.8689	3.3700e-003	0.1815	0.0535	0.2351	0.0787	0.0502	0.1288	0.0000	296.5233	296.5233	0.0652	0.0000	298.1530
2026	0.0188	0.1736	0.2528	4.4000e-004	5.2100e-003	7.1200e-003	0.0123	1.4000e-003	6.6900e-003	8.1000e-003	0.0000	38.4994	38.4994	7.7200e-003	0.0000	38.6925
Maximum	**0.1436**	**1.3173**	**1.8689**	**3.3700e-003**	**0.1815**	**0.0535**	**0.2351**	**0.0787**	**0.0502**	**0.1288**	**0.0000**	**296.5233**	**296.5233**	**0.0652**	**0.0000**	**298.1530**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2025	4-5-2025	0.4276	0.4276
2	4-6-2025	7-5-2025	0.3478	0.3478
3	7-6-2025	10-5-2025	0.3516	0.3516
4	10-6-2025	1-5-2026	0.3520	0.3520
5	1-6-2026	4-5-2026	0.1719	0.1719
		Highest	0.4276	0.4276

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2117	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Energy	4.1700e-003	0.0379	0.0318	2.3000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	72.8209	72.8209	2.2200e-003	1.0500e-003	73.1897
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	11.5786	0.0000	11.5786	0.6843	0.0000	28.6855
Water						0.0000	0.0000		0.0000	0.0000	0.1586	0.7871	0.9457	0.0163	3.9000e-004	1.4707
Total	**0.2158**	**0.0379**	**0.0322**	**2.3000e-004**	**0.0000**	**2.8800e-003**	**2.8800e-003**	**0.0000**	**2.8800e-003**	**2.8800e-003**	**11.7372**	**73.6088**	**85.3460**	**0.7028**	**1.4400e-003**	**103.3468**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2117	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.8000e-004
Energy	4.1700e-003	0.0379	0.0318	2.3000e-004		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	72.8209	72.8209	2.2200e-003	1.0500e-003	73.1897
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	11.5786	0.0000	11.5786	0.6843	0.0000	28.6855
Water						0.0000	0.0000		0.0000	0.0000	0.1586	0.7871	0.9457	0.0163	3.9000e-004	1.4707
Total	**0.2158**	**0.0379**	**0.0322**	**2.3000e-004**	**0.0000**	**2.8800e-003**	**2.8800e-003**	**0.0000**	**2.8800e-003**	**2.8800e-003**	**11.7372**	**73.6088**	**85.3460**	**0.7028**	**1.4400e-003**	**103.3468**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/6/2025	1/8/2025	5	3	
2	Grading	Grading	1/9/2025	2/20/2025	5	31	
3	Building Construction	Building Construction	2/21/2025	2/19/2026	5	260	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 46.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	1.10	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	1.20	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	19.00	8.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-004	2.0000e-003	3.3400e-003	0.0000		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.4110	0.4110	1.3000e-004	0.0000	0.4144

Total	**2.0000e-004**	**2.0000e-003**	**3.3400e-003**	**0.0000**	**0.0271**	**8.0000e-005**	**0.0272**	**0.0149**	**7.0000e-005**	**0.0150**	**0.0000**	**0.4110**	**0.4110**	**1.3000e-004**	**0.0000**	**0.4144**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.7000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3538	0.3538	2.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2362	0.2362	1.0000e-005	0.0000	0.2364
Total	**1.4000e-004**	**8.5000e-004**	**9.4000e-004**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.5900**	**0.5900**	**3.0000e-005**	**0.0000**	**0.5906**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-004	2.0000e-003	3.3400e-003	0.0000		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.4110	0.4110	1.3000e-004	0.0000	0.4144
Total	**2.0000e-004**	**2.0000e-003**	**3.3400e-003**	**0.0000**	**0.0271**	**8.0000e-005**	**0.0272**	**0.0149**	**7.0000e-005**	**0.0150**	**0.0000**	**0.4110**	**0.4110**	**1.3000e-004**	**0.0000**	**0.4144**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.7000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3538	0.3538	2.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2362	0.2362	1.0000e-005	0.0000	0.2364
Total	**1.4000e-004**	**8.5000e-004**	**9.4000e-004**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.5900**	**0.5900**	**3.0000e-005**	**0.0000**	**0.5906**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1180	0.0000	0.1180	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2316	0.2783	5.9000e-004		9.1400e-003	9.1400e-003		8.4100e-003	8.4100e-003	0.0000	52.2123	52.2123	0.0169	0.0000	52.6345
Total	**0.0245**	**0.2316**	**0.2783**	**5.9000e-004**	**0.1180**	**9.1400e-003**	**0.1271**	**0.0540**	**8.4100e-003**	**0.0624**	**0.0000**	**52.2123**	**52.2123**	**0.0169**	**0.0000**	**52.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.7000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3538	0.3538	2.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	9.2000e-004	9.2200e-003	3.0000e-005	3.8700e-003	2.0000e-005	3.8900e-003	1.0300e-003	2.0000e-005	1.0500e-003	0.0000	2.7122	2.7122	7.0000e-005	0.0000	2.7139
Total	**1.3600e-003**	**1.6900e-003**	**9.3600e-003**	**3.0000e-005**	**3.9600e-003**	**2.0000e-005**	**3.9800e-003**	**1.0500e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.0660**	**3.0660**	**9.0000e-005**	**0.0000**	**3.0681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1180	0.0000	0.1180	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2316	0.2783	5.9000e-004		9.1400e-003	9.1400e-003		8.4100e-003	8.4100e-003	0.0000	52.2122	52.2122	0.0169	0.0000	52.6344
Total	**0.0245**	**0.2316**	**0.2783**	**5.9000e-004**	**0.1180**	**9.1400e-003**	**0.1271**	**0.0540**	**8.4100e-003**	**0.0624**	**0.0000**	**52.2122**	**52.2122**	**0.0169**	**0.0000**	**52.6344**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.7000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3538	0.3538	2.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3400e-003	9.2000e-004	9.2200e-003	3.0000e-005	3.8700e-003	2.0000e-005	3.8900e-003	1.0300e-003	2.0000e-005	1.0500e-003	0.0000	2.7122	2.7122	7.0000e-005	0.0000	2.7139
Total	**1.3600e-003**	**1.6900e-003**	**9.3600e-003**	**3.0000e-005**	**3.9600e-003**	**2.0000e-005**	**3.9800e-003**	**1.0500e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.0660**	**3.0660**	**9.0000e-005**	**0.0000**	**3.0681**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	1.0072	1.5008	2.3000e-003		0.0441	0.0441		0.0415	0.0415	0.0000	199.9564	199.9564	0.0458	0.0000	201.1017
Total	**0.1064**	**1.0072**	**1.5008**	**2.3000e-003**		**0.0441**	**0.0441**		**0.0415**	**0.0415**	**0.0000**	**199.9564**	**199.9564**	**0.0458**	**0.0000**	**201.1017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.6000e-004	1.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3048	0.3048	2.0000e-005	0.0000	0.3052
Vendor	1.7900e-003	0.0670	0.0127	2.3000e-004	5.4000e-003	6.0000e-005	5.4600e-003	1.5600e-003	6.0000e-005	1.6200e-003	0.0000	21.3650	21.3650	1.7800e-003	0.0000	21.4094
Worker	9.2300e-003	6.3000e-003	0.0633	2.1000e-004	0.0266	1.5000e-004	0.0267	7.0600e-003	1.4000e-004	7.2000e-003	0.0000	18.6181	18.6181	4.5000e-004	0.0000	18.6294
Total	**0.0110**	**0.0740**	**0.0762**	**4.4000e-004**	**0.0321**	**2.1000e-004**	**0.0323**	**8.6400e-003**	**2.0000e-004**	**8.8400e-003**	**0.0000**	**40.2879**	**40.2879**	**2.2500e-003**	**0.0000**	**40.3440**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	1.0072	1.5008	2.3000e-003		0.0441	0.0441		0.0415	0.0415	0.0000	199.9562	199.9562	0.0458	0.0000	201.1015
Total	**0.1064**	**1.0072**	**1.5008**	**2.3000e-003**		**0.0441**	**0.0441**		**0.0415**	**0.0415**	**0.0000**	**199.9562**	**199.9562**	**0.0458**	**0.0000**	**201.1015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.6000e-004	1.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3048	0.3048	2.0000e-005	0.0000	0.3052
Vendor	1.7900e-003	0.0670	0.0127	2.3000e-004	5.4000e-003	6.0000e-005	5.4600e-003	1.5600e-003	6.0000e-005	1.6200e-003	0.0000	21.3650	21.3650	1.7800e-003	0.0000	21.4094
Worker	9.2300e-003	6.3000e-003	0.0633	2.1000e-004	0.0266	1.5000e-004	0.0267	7.0600e-003	1.4000e-004	7.2000e-003	0.0000	18.6181	18.6181	4.5000e-004	0.0000	18.6294
Total	**0.0110**	**0.0740**	**0.0762**	**4.4000e-004**	**0.0321**	**2.1000e-004**	**0.0323**	**8.6400e-003**	**2.0000e-004**	**8.8400e-003**	**0.0000**	**40.2879**	**40.2879**	**2.2500e-003**	**0.0000**	**40.3440**

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1619	0.2412	3.7000e-004		7.0800e-003	7.0800e-003		6.6600e-003	6.6600e-003	0.0000	32.1359	32.1359	7.3600e-003	0.0000	32.3199
Total	**0.0171**	**0.1619**	**0.2412**	**3.7000e-004**		**7.0800e-003**	**7.0800e-003**		**6.6600e-003**	**6.6600e-003**	**0.0000**	**32.1359**	**32.1359**	**7.3600e-003**	**0.0000**	**32.3199**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.0000e-004	2.0000e-005	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0487	0.0487	0.0000	0.0000	0.0487
Vendor	2.8000e-004	0.0107	1.9700e-003	4.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	3.4101	3.4101	2.9000e-004	0.0000	3.4174
Worker	1.4100e-003	9.3000e-004	9.5600e-003	3.0000e-005	4.2700e-003	2.0000e-005	4.3000e-003	1.1300e-003	2.0000e-005	1.1600e-003	0.0000	2.9048	2.9048	7.0000e-005	0.0000	2.9065
Total	**1.6900e-003**	**0.0117**	**0.0116**	**7.0000e-005**	**5.2100e-003**	**3.0000e-005**	**5.2500e-003**	**1.4000e-003**	**3.0000e-005**	**1.4400e-003**	**0.0000**	**6.3636**	**6.3636**	**3.6000e-004**	**0.0000**	**6.3726**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1619	0.2412	3.7000e-004		7.0800e-003	7.0800e-003		6.6600e-003	6.6600e-003	0.0000	32.1358	32.1358	7.3600e-003	0.0000	32.3199
Total	**0.0171**	**0.1619**	**0.2412**	**3.7000e-004**		**7.0800e-003**	**7.0800e-003**		**6.6600e-003**	**6.6600e-003**	**0.0000**	**32.1358**	**32.1358**	**7.3600e-003**	**0.0000**	**32.3199**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.0000e-004	2.0000e-005	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0487	0.0487	0.0000	0.0000	0.0487
Vendor	2.8000e-004	0.0107	1.9700e-003	4.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	3.4101	3.4101	2.9000e-004	0.0000	3.4174
Worker	1.4100e-003	9.3000e-004	9.5600e-003	3.0000e-005	4.2700e-003	2.0000e-005	4.3000e-003	1.1300e-003	2.0000e-005	1.1600e-003	0.0000	2.9048	2.9048	7.0000e-005	0.0000	2.9065
Total	**1.6900e-003**	**0.0117**	**0.0116**	**7.0000e-005**	**5.2100e-003**	**3.0000e-005**	**5.2500e-003**	**1.4000e-003**	**3.0000e-005**	**1.4400e-003**	**0.0000**	**6.3636**	**6.3636**	**3.6000e-004**	**0.0000**	**6.3726**

Helena Agri-Enterprises Buildout
Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	145.70	1000sqft	31.14	145,700.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - PD - Truck/Tank Rinse Pad, Office, Shop, Warehouse, Tank Containment, Fertilizer Warehouse, Phase 2 warehouse
User Defined Industrial - set at 1 - to evaluate truck deliveries

Vehicle Trips - Increased ADT by 50% to show worst-case increase in operational trips
TIS Employees = 102 ADT M-F, divided by 145.7 ksf = 0.70 trips per ksf
TIS Employees = 75 ADT Sat, divided by 99.7 ksf = 0.52
Trucks = 105 ADT M-F and 78 ADT Saturday
Water And Wastewater - Applicant provided information + 50%

Operational Off-Road Equipment - Project Applicant provided information

Fleet Mix - Adjusted fleet mix for employee vehicles and included separate line item for heavy duty trucks

Stationary Sources - Process Boilers -

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.17	0.00
tblFleetMix	HHD	0.17	1.00
tblFleetMix	LDA	0.52	0.63
tblFleetMix	LDA	0.52	0.00
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT1	0.03	0.00
tblFleetMix	LDT2	0.15	0.19
tblFleetMix	LDT2	0.15	0.00
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.00
tblFleetMix	LHD2	3.8430e-003	5.0210e-003
tblFleetMix	LHD2	3.8430e-003	0.00
tblFleetMix	MCY	5.2980e-003	0.00
tblFleetMix	MCY	5.2980e-003	0.00
tblFleetMix	MDV	0.10	0.13
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	5.5700e-004	0.00
tblFleetMix	MH	5.5700e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.6570e-003	0.00
tblFleetMix	OBUS	1.6570e-003	0.00
tblFleetMix	SBUS	8.7300e-004	0.00
tblFleetMix	SBUS	8.7300e-004	0.00
tblFleetMix	UBUS	1.5200e-003	0.00
tblFleetMix	UBUS	1.5200e-003	0.00
tblLandUse	LotAcreage	3.34	31.14
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	72.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG

tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	14.70	30.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.49	0.52
tblVehicleTrips	ST_TR	0.00	78.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	WD_TR	3.82	0.70
tblVehicleTrips	WD_TR	0.00	105.00
tblWater	IndoorWaterUseRate	33,693,125.00	1,500,000.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6705	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003
Energy	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	536.1092	536.1092	0.0200	6.4700e-003	538.5383
Mobile	0.1187	2.9522	0.9422	0.0177	0.5710	7.0800e-003	0.5781	0.1555	6.7400e-003	0.1622	0.0000	1,677.8420	1,677.8420	0.0670	0.0000	1,679.5180
Offroad	0.0211	0.1931	0.2476	4.1000e-004		9.6700e-003	9.6700e-003		8.9000e-003	8.9000e-003	0.0000	36.0762	36.0762	0.0117	0.0000	36.3679
Stationary	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4603	102.4603	1.9600e-003	0.0000	102.5094
Waste						0.0000	0.0000		0.0000	0.0000	36.6744	0.0000	36.6744	2.1674	0.0000	90.8592
Water						0.0000	0.0000		0.0000	0.0000	0.4759	2.3612	2.8371	0.0490	1.1800e-003	4.4122
Total	**0.8318**	**3.3049**	**1.4085**	**0.0196**	**0.5710**	**0.0352**	**0.6062**	**0.1555**	**0.0341**	**0.1896**	**37.1503**	**2,354.8515**	**2,392.0018**	**2.3171**	**7.6500e-003**	**2,452.2078**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6705	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003
Energy	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	536.1092	536.1092	0.0200	6.4700e-003	538.5383
Mobile	0.1187	2.9522	0.9422	0.0177	0.5710	7.0800e-003	0.5781	0.1555	6.7400e-003	0.1622	0.0000	1,677.8420	1,677.8420	0.0670	0.0000	1,679.5180
Offroad	0.0211	0.1931	0.2476	4.1000e-004		9.6700e-003	9.6700e-003		8.9000e-003	8.9000e-003	0.0000	36.0762	36.0762	0.0117	0.0000	36.3679
Stationary	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4603	102.4603	1.9600e-003	0.0000	102.5094
Waste						0.0000	0.0000		0.0000	0.0000	36.6744	0.0000	36.6744	2.1674	0.0000	90.8592
Water						0.0000	0.0000		0.0000	0.0000	0.4759	2.3612	2.8371	0.0490	1.1800e-003	4.4122
Total	**0.8318**	**3.3049**	**1.4085**	**0.0196**	**0.5710**	**0.0352**	**0.6062**	**0.1555**	**0.0341**	**0.1896**	**37.1503**	**2,354.8515**	**2,392.0018**	**2.3171**	**7.6500e-003**	**2,452.2078**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1187	2.9522	0.9422	0.0177	0.5710	7.0800e-003	0.5781	0.1555	6.7400e-003	0.1622	0.0000	1,677.8420	1,677.8420	0.0670	0.0000	1,679.5180
Unmitigated	0.1187	2.9522	0.9422	0.0177	0.5710	7.0800e-003	0.5781	0.1555	6.7400e-003	0.1622	0.0000	1,677.8420	1,677.8420	0.0670	0.0000	1,679.5180

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	101.99	75.76	0.00	447,720	447,720
User Defined Industrial	105.00	78.00	0.00	940,680	940,680
Total	206.99	153.76	0.00	1,388,400	1,388,400

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	14.70	6.60	6.60	100.00	0.00	0.00	100	0	0
User Defined Industrial	30.00	6.60	6.60	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.625747	0.033345	0.185999	0.130396	0.019491	0.005021	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	373.8428	373.8428	0.0169	3.5000e-003	375.3076
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	373.8428	373.8428	0.0169	3.5000e-003	375.3076
NaturalGas Mitigated	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	162.2665	162.2665	3.1100e-003	2.9700e-003	163.2308
NaturalGas Unmitigated	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	162.2665	162.2665	3.1100e-003	2.9700e-003	163.2308

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	3.04076e+006	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	162.2665	162.2665	3.1100e-003	2.9700e-003	163.2308
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0164**	**0.1491**	**0.1252**	**8.9000e-004**		**0.0113**	**0.0113**		**0.0113**	**0.0113**	**0.0000**	**162.2665**	**162.2665**	**3.1100e-003**	**2.9700e-003**	**163.2308**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	3.04076e+006	0.0164	0.1491	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	162.2665	162.2665	3.1100e-003	2.9700e-003	163.2308
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0164**	**0.1491**	**0.1252**	**8.9000e-004**		**0.0113**	**0.0113**		**0.0113**	**0.0113**	**0.0000**	**162.2665**	**162.2665**	**3.1100e-003**	**2.9700e-003**	**163.2308**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	1.28507e+006	373.8428	0.0169	3.5000e-003	375.3076
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**373.8428**	**0.0169**	**3.5000e-003**	**375.3076**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	1.28507e+006	373.8428	0.0169	3.5000e-003	375.3076
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**373.8428**	**0.0169**	**3.5000e-003**	**375.3076**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6705	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003
Unmitigated	0.6705	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003
Total	**0.6705**	**1.0000e-005**	**1.3400e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6200e-003**	**2.6200e-003**	**1.0000e-005**	**0.0000**	**2.7900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6200e-003	2.6200e-003	1.0000e-005	0.0000	2.7900e-003
Total	**0.6705**	**1.0000e-005**	**1.3400e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6200e-003**	**2.6200e-003**	**1.0000e-005**	**0.0000**	**2.7900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.8371	0.0490	1.1800e-003	4.4122
Unmitigated	2.8371	0.0490	1.1800e-003	4.4122

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1.5 / 0	2.8371	0.0490	1.1800e-003	4.4122
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.8371**	**0.0490**	**1.1800e-003**	**4.4122**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1.5 / 0	2.8371	0.0490	1.1800e-003	4.4122
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.8371**	**0.0490**	**1.1800e-003**	**4.4122**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.6744	2.1674	0.0000	90.8592
Unmitigated	36.6744	2.1674	0.0000	90.8592

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	180.67	36.6744	2.1674	0.0000	90.8592
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**36.6744**	**2.1674**	**0.0000**	**90.8592**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	180.67	36.6744	2.1674	0.0000	90.8592
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**36.6744**	**2.1674**	**0.0000**	**90.8592**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	3	4.00	260	89	0.20	CNG
Rubber Tired Loaders	1	4.00	72	203	0.36	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0169	0.1596	0.2211	3.0000e-004		8.5400e-003	8.5400e-003		7.8600e-003	7.8600e-003	0.0000	26.1868	26.1868	8.4700e-003	0.0000	26.3985
Rubber Tired Loaders	4.1100e-003	0.0335	0.0265	1.1000e-004		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	9.8894	9.8894	3.2000e-003	0.0000	9.9694
Total	**0.0211**	**0.1931**	**0.2476**	**4.1000e-004**		**9.6600e-003**	**9.6600e-003**		**8.8900e-003**	**8.8900e-003**	**0.0000**	**36.0762**	**36.0762**	**0.0117**	**0.0000**	**36.3679**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
Boiler	1	16	1920	2	CNG

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Boiler - CNG (2 - 5 MMBTU)	5.1800e-003	0.0106	0.0922	5.6000e-004		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	102.4603	102.4603	1.9600e-003	0.0000	102.5094
Total	**5.1800e-003**	**0.0106**	**0.0922**	**5.6000e-004**		**7.1500e-003**	**7.1500e-003**		**7.1500e-003**	**7.1500e-003**	**0.0000**	**102.4603**	**102.4603**	**1.9600e-003**	**0.0000**	**102.5094**

11.0 Vegetation

APPENDIX B: ENERGY ESTIMATES

Blossom Avenue Apartments Project—Energy Consumption Summary

Date of Last Revision: February 9, 2021

Summary of Energy Use During Construction			(Annually)
Phase 1	Construction vehicle fuel	9,091	gallons (gasoline, diesel)
Phase 1	Construction equipment fuel	33,345	gallons (diesel)
Phase 2	Construction vehicle fuel	4,210	gallons (gasoline, diesel)
	Construction equipment fuel	28,654	gallons (diesel)
	Total	75,301	gallons (gasoline, diesel)

Summary of Energy Use During Proposed Operations		(Annually)
Operational vehicle fuel consumption	139,137	gallons (gasoline, diesel)
Operational natural gas consumption	5,344,760	kilo-British Thermal Units
Operational electricity consumption	1,285,070	kilowatt hours

Construction Vehicle Fuel Calculations - Phase 1

California Air Resource Board (ARB). 2021. EMFAC2017 Web Database v1.0.2. Website: https://arb.ca.gov/emfac/2017/. Accessed February 26, 2021.

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: KINGS
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

VMT = Vehicle Miles Traveled
FE = Fuel Economy

Given *Calculations*

Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT (mi/day)	Fuel Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Kings County	2024	HHDT	Aggregated	Aggregated	GAS	2.06844631	241.430979	0.061083313	3.952486667	954.2527
Kings County	2024	HHDT	Aggregated	Aggregated	DSL	5979.746758	856519.483	118.3245137	7.238732329	6200115
Kings County	2024	LDA	Aggregated	Aggregated	GAS	79721.2593	3089882.52	93.51700293	33.0408634	1.02E+08
Kings County	2024	LDA	Aggregated	Aggregated	DSL	771.9252054	31027.9291	0.560401439	55.36732592	1717933
Kings County	2024	LDT1	Aggregated	Aggregated	GAS	8314.69915	284671.412	10.16032073	28.01795525	7975911
Kings County	2024	LDT1	Aggregated	Aggregated	DSL	5.1427581	101.218324	0.004036493	25.07580647	2538.131
Kings County	2024	LDT2	Aggregated	Aggregated	GAS	26998.55431	943097.567	35.84382927	26.31129503	24814118
Kings County	2024	LDT2	Aggregated	Aggregated	DSL	177.4053551	7021.82422	0.172147846	40.78949796	286416.7
Kings County	2024	LHDT1	Aggregated	Aggregated	GAS	2130.219765	69491.2885	8.122274539	8.555643888	594542.7
Kings County	2024	LHDT1	Aggregated	Aggregated	DSL	2746.041238	88557.0266	4.884051781	18.13187709	1605705
Kings County	2024	LHDT2	Aggregated	Aggregated	GAS	300.8420886	9913.21481	1.323325844	7.491136713	74261.25
Kings County	2024	LHDT2	Aggregated	Aggregated	DSL	801.0412799	27067.0316	1.654229228	16.36232216	442879.5
Kings County	2024	MDV	Aggregated	Aggregated	GAS	25979.78031	824307.007	39.50277554	20.86706556	17200868
Kings County	2024	MDV	Aggregated	Aggregated	DSL	594.3659379	22420.0067	0.758831738	29.5454257	662408.6

Worker

Sum of VMT*FE (Column BI)	**1.57E+08**
Total VMT	**5397558**
Weighted Average Fuel Economy	**29.1743**

Vendor

Sum of VMT*FE (Column BI)	**26781735**
Total VMT	**1898516**
Weighted Average Fuel Economy	**14.10666**

Haul

Sum of VMT*FE (Column BI)	**6201070**
Total VMT	**856760.9**
Weighted Average Fuel Economy	**7.237806**

Construction Schedule - Phase 1

Source: CalEEMod Output

Helena Agri-Enterprises Facility

CalEEMod Phase Name		Start Date	End Date	Num Days Week	Num Days
Site Prepara	Site Preparation	1/3/2022	1/5/2022	5	3
Grading	Grading	1/6/2022	2/24/2022	5	36
Building Con	Building Construction	2/25/2022	2/23/2023	5	260
Paving	Paving	2/24/2022	3/9/2023	5	10

Construction Trips and VMT

	Trips per Day		Total Trips	Construction Trip Length in Miles				Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
Phase Nam	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Number of Days per Phase	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
Site Prepar	20	0	10	16.8	6.6	20	3	60	0	10	1,008	0	200	34.55	0.00	1.38
Grading	24	0	510	16.8	6.6	20	36	864	0	510	14,515	0	10,200	497.53	0.00	70.46
Building Co	42	16	1195	16.8	6.6	20	260	10,920	4,160	1,195	183,456	27,456	23,900	6,288.27	1,946.31	165.11
Paving	15	0	10	16.8	6.6	20	10	150	0	10	2,520	0	200	86.38	0.00	1.38

Total Project Construction VMT (miles)

263,455

Total Project Fuel Consumption (gallons)

9,091

Construction Equipment Fuel Calculation

Source: AQ/GHG Appendix, CalEEMod Output
Helena Agri-Enterprises Facility Construction Phase 1

Construction Schedule - Phase 1

Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
Project Construction	Site Preparation	1/3/2022	1/5/2022	5	3
Project Construction	Grading	1/6/2022	2/24/2022	5	36
Project Construction	Building Construction	2/25/2022	2/23/2023	5	260
Project Construction	Paving	2/24/2022	3/9/2023	5	10

Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	Diesel Fuel Usage
Site Preparation	Scrapers	2	8	367	0.48	3	8,455.68	422.78
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	3	861.36	43.07
Grading	Excavators	2	8	158	0.38	36	34,583.04	1,729.15
Grading	Graders	1	8	187	0.41	36	22,080.96	1,104.05
Grading	Scrapers	2	8	367	0.48	36	101,468.16	5,073.41
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	36	20,672.64	1,033.63
Building Construction	Cranes	1	1.1	231	0.29	260	19,159.14	957.96
Building Construction	Forklifts	3	8	89	0.2	260	111,072.00	5,553.60
Building Construction	Generator Sets	1	8	84	0.74	260	129,292.80	6,464.64
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	260	195,959.40	9,797.97
Building Construction	Welders	1	1.2	46	0.45	260	6,458.40	322.92
Paving	Pavers	1	8	130	0.42	10	4,368.00	218.40
Paving	Paving Equipment	2	8	132	0.36	10	7,603.20	380.16
Paving	Rollers	2	8	80	0.38	10	4,864.00	243.20
						Total Construction Equipment Fuel Consumption (gallons)		**33,344.94**

Notes:
Equipment assumptions are provided in the CalEEMod output files.
Fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.
South Coast Air Quality Management District. 1993. Air Quality Handbook, Table A9-3E.

Construction Vehicle Fuel Calculations - Phase 2

California Air Resource Board (ARB). 2021. EMFAC2017 Web Database v1.0.2. Website: https://arb.ca.gov/emfac/2017/. Accessed February 26, 2021.

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: KINGS
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

VMT = Vehicle Miles Traveled
FE = Fuel Economy

Given *Calculations*

Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT (mi/day)	Fuel Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Kings County	2024	HHDT	Aggregated	Aggregated	GAS	2.06844631	241.430979	0.061083313	3.952486667	954.2527
Kings County	2024	HHDT	Aggregated	Aggregated	DSL	5979.746758	856519.483	118.3245137	7.238732329	6200115
Kings County	2024	LDA	Aggregated	Aggregated	GAS	79721.2593	3089882.52	93.51700293	33.0408634	1.02E+08
Kings County	2024	LDA	Aggregated	Aggregated	DSL	771.9252054	31027.9291	0.560401439	55.36732592	1717933
Kings County	2024	LDT1	Aggregated	Aggregated	GAS	8314.69915	284671.412	10.16032073	28.01795525	7975911
Kings County	2024	LDT1	Aggregated	Aggregated	DSL	5.1427581	101.218324	0.004036493	25.07580647	2538.131
Kings County	2024	LDT2	Aggregated	Aggregated	GAS	26998.55431	943097.567	35.84382927	26.31129503	24814118
Kings County	2024	LDT2	Aggregated	Aggregated	DSL	177.4053551	7021.82422	0.172147846	40.78949796	286416.7
Kings County	2024	LHDT1	Aggregated	Aggregated	GAS	2130.219765	69491.2885	8.122274539	8.555643888	594542.7
Kings County	2024	LHDT1	Aggregated	Aggregated	DSL	2746.041238	88557.0266	4.884051781	18.13187709	1605705
Kings County	2024	LHDT2	Aggregated	Aggregated	GAS	300.8420886	9913.21481	1.323325844	7.491136713	74261.25
Kings County	2024	LHDT2	Aggregated	Aggregated	DSL	801.0412799	27067.0316	1.654229228	16.36232216	442879.5
Kings County	2024	MDV	Aggregated	Aggregated	GAS	25979.78031	824307.007	39.50277554	20.86706556	17200868
Kings County	2024	MDV	Aggregated	Aggregated	DSL	594.3659379	22420.0067	0.758831738	29.5454257	662408.6

Worker

Sum of VMT*FE (Column BI)	**1.57E+08**
Total VMT	**5397558**
Weighted Average Fuel Economy	**29.1743**

Vendor

Sum of VMT*FE (Column BI)	**26781735**
Total VMT	**1898516**
Weighted Average Fuel Economy	**14.10666**

Haul

Sum of VMT*FE (Column BI)	**6201070**
Total VMT	**856760.9**
Weighted Average Fuel Economy	**7.237806**

Construction Schedule - Phase 2
Source: CalEEMod Output
Helena Agri-Enterprises Facility

CalEEMod Phase Name		Start Date	End Date	Num Days Week	Num Days
Site Prepara	Site Preparation	1/6/2025	1/8/2025	5	3
Grading	Grading	1/9/2025	2/20/2025	5	31
Building Con	Building Construction	2/21/2025	2/19/2026	5	260

Construction Trips and VMT

	Trips per Day		Total Trips	Construction Trip Length in Miles				Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Number of Days per Phase	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
Site Prepar	18	0	10	16.8	6.6	20	3	54	0	10	907	0	200	31.10	0.00	1.38
Grading	20	0	10	16.8	6.6	20	31	620	0	10	10,416	0	200	357.03	0.00	1.38
Building Co	19	8	10	16.8	6.6	20	260	4,940	2,080	10	82,992	13,728	200	2,844.70	973.16	1.38

Total Project Construction VMT (miles)
108,643

Total Project Fuel Consumption (gallons)
4,210

Construction Equipment Fuel Calculation

Source: AQ/GHG Appendix, CalEEMod Output
Helena Agri-Enterprises Facility

Construction Schedule - Phase 2

Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
Project Construction	Site Preparation	1/6/2025	1/8/2025	5	3
Project Construction	Grading	1/9/2025	2/20/2025	5	31
Project Construction	Building Construction	2/21/2025	2/19/2026	5	260

Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	Diesel Fuel Usage
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	3	861.36	43.07
Grading	Excavators	2	8	158	0.38	31	29,779.84	1,488.99
Grading	Graders	1	8	187	0.41	31	19,014.16	950.71
Grading	Scrapers	1	8	367	0.48	31	43,687.68	2,184.38
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	31	17,801.44	890.07
Building Construction	Cranes	1	1.1	231	0.29	260	19,159.14	957.96
Building Construction	Forklifts	3	8	89	0.2	260	111,072.00	5,553.60
Building Construction	Generator Sets	1	8	84	0.74	260	129,292.80	6,464.64
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	260	195,959.40	9,797.97
Building Construction	Welders	1	1.2	46	0.45	260	6,458.40	322.92
						Total Construction Equipment Fuel Consumption (gallons)		**28,654.31**

Notes:
Equipment assumptions are provided in the CalEEMod output files.
Fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.
South Coast Air Quality Management District. 1993. Air Quality Handbook, Table A9-3E.

Operational Fuel Calculation—Passenger Vehicles

California Air Resource Board (ARB). 2021. EMFAC2017 Web Database v1.0.2. Website: https://arb.ca.gov/emfac/2017/. Accessed February 26, 2021.

Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

VMT = Vehicle Miles Traveled
FE = Fuel Economy

				Employees					*Calculations*	
Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
KINGS	KINGS	2026	LDA	Aggregated	Aggregated	GAS	3165678.346	90.95881088	34.80342712	110176456
KINGS	KINGS	2026	LDA	Aggregated	Aggregated	DSL	33979.53554	0.585117503	58.07301163	1973293.96
KINGS	KINGS	2026	LDT1	Aggregated	Aggregated	GAS	295482.5068	10.03027189	29.45907251	8704640.59
KINGS	KINGS	2026	LDT1	Aggregated	Aggregated	DSL	80.9325937	0.003105342	26.06237902	2109.29593
KINGS	KINGS	2026	LDT2	Aggregated	Aggregated	GAS	964861.1123	34.41290201	28.03777234	27052556.2
KINGS	KINGS	2026	LDT2	Aggregated	Aggregated	DSL	7931.764493	0.185586422	42.73892664	338995.101
KINGS	KINGS	2026	LHDT1	Aggregated	Aggregated	GAS	66785.23466	7.587828514	8.801626781	587818.71
KINGS	KINGS	2026	LHDT1	Aggregated	Aggregated	DSL	83040.16998	4.460735	18.61580434	1545859.56
KINGS	KINGS	2026	LHDT2	Aggregated	Aggregated	GAS	9671.070851	1.255599333	7.702354246	74490.0136
KINGS	KINGS	2026	LHDT2	Aggregated	Aggregated	DSL	26469.16925	1.571718436	16.84091033	445764.906
KINGS	KINGS	2026	MDV	Aggregated	Aggregated	GAS	782860.5781	35.33800351	22.15350332	17343104.4
KINGS	KINGS	2026	MDV	Aggregated	Aggregated	DSL	23111.92758	0.742923962	31.10941194	718998.476
KINGS	KINGS	2026	MHDT	Aggregated	Aggregated	GAS	11892.31523	2.286306195	5.20154092	61858.3643
KINGS	KINGS	2026	MHDT	Aggregated	Aggregated	DSL	67889.43324	7.050330465	9.629255476	653724.697

Sum of VMT*FE **169679670**
Total VMT **5539734.1**
Weighted Average FE **30.6295694**

				Trucks					*Calculations*	
Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
KINGS	2026	HHDT	Aggregated	Aggregated	GAS	1.616386175	198.6921218	0.048046791	4.135387958	821.669008
KINGS	2026	HHDT	Aggregated	Aggregated	DSL	6313.914371	887211.6946	117.4301414	7.555229722	6703088.17

Sum of VMT*FE **6703909.83**
Total VMT **887410.387**
Weighted Average FE **7.55446402**

Total VMT - Buildout
Helena Agri-Enterprises Facility

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	101.99	75.76	0.00	447,720	447,720
User Defined Industrial	105.00	78.00	0.00	940,680	940,680
Total	206.99	153.76	0.00	1,388,400	1,388,400

	Annual VMT (miles)	**Fuel Consumption (gallons/year)**
Employees VMT	447,720	14,617.25
Trucks VMT	940,680	124,519.75
Total VMT	1,388,400	139,137.00

Project Operations Natural Gas Use

Source: AQ/GHG Appendix, CalEEMod Output
Helena Agri-Enterprises Facility

kBTU/yr = kilo-British Thermal Units/year

	Natural Gas Use (kBTU/yr)
Manufacturing	3,040,760
Boiler - 2 MMBTU	2,304,000
Total	**5,344,760 kBTU/yr**

Project Operations Electricity Use

Source: AQ/GHG Appendix, CalEEMod Output

Helena Agri-Enterprises Facility

kWh/yr = kilowatt hours per year

Land Use	Electricity Use (kWh/yr)	
Manufacturing	1,285,070	
Total	**1,285,070**	**kWh/yr**

APPENDIX B

CULTURAL RESOURCES

A
PHASE I CULTURAL RESOURCE SURVEY
FOR HELENA AGRI-ENTERPRISES,
CITY OF LEMOORE, CALIFORNIA

Submitted to:
Helena Agri-Enterprises, LLC
7576 N. Ingram Avenue, Suite 101
Fresno, California 93711

Keywords:
Lemoore 7.5' Quadrangle, City of Lemoore,
California Environmental Quality Act

Submitted by:
Hudlow Cultural Resource Associates
1405 Sutter Lane
Bakersfield, California 93309

Author:
Scott M. Hudlow

FEBRUARY 2021

Management Summary

At the request of Helena Agri-Enterprises, a Phase I Cultural Resource Survey was conducted on an approximate thirty-one-acre parcel, located at Industry Parkway, City of Lemoore, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

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List of Figures

1.0 Introduction

At the request of Helena Agri-Enterprises, *Hudlow Cultural Resource Associates* conducted a Phase I Cultural Resource Survey in accordance with the California Environmental Quality Act for a proposed industrial development project. The property is on Industry Parkway, west of Highway 41, City of Lemoore, California. The Phase I Cultural Resource Survey consisted of a pedestrian survey and a cultural resource record search.

2.0 Project Location

The project area is in the City of Lemoore. It is in the E ½ of the SE ¼ of the SE ¼ of Section 5 and the N ½ of the NE ¼ of the NE ¼ of the NE ¼ of Section 8, T.18S., R.20E., Mount Diablo Baseline and Meridian, as displayed on the United States Geological Survey (USGS) Lemoore 7.5-minute quadrangle map (Figure 1). The proposed industrial development is on Industry Parkway, west of Highway 41 in the City of Lemoore, California.

3.0 Record Search

A record search of the project area and the environs within one half-mile was conducted at the Southern San Joaquin Archaeological Information Center. Archaeological Information Center staff conducted the record search, RS# 21-045, on February 8, 2021. The record search revealed that eleven cultural resource surveys have been conducted within one half-mile of the project area. Two surveys have previously addressed the parcel (Love and Tang 2020a; Love and Tang 2020b). No cultural resources have been located on the current project area; however, two cultural resources have been recorded within one half-mile of the current project area, including one that is directly adjacent to the parcel, but not within the project boundaries. The first cultural resource is the Southern Pacific Rail line; the second is a historic canal (Appendix II).

4.0 Environmental Background

The project area is located at elevations between 215 and 220 feet above mean sea level in the Great Central Valley, which is composed of two valleys-the Sacramento Valley and the San Joaquin Valley. The parcel is located south of the Kings River. This agricultural lot is denuded of native vegetation, and was last planted in cotton (Figures 2 and 3).

5.0 Prehistoric Archaeological Context

A limited amount of archaeological research has been conducted in the southern San Joaquin Valley. Thus, consensus on a generally agreed upon regional cultural chronology has yet to be developed. Most cultural sequences can be summarized into several distinct time periods: Early, Middle, and Late. Sequences differ in their inclusion of various "horizons," "technologies," or "stages." A prehistoric archaeological summary of the southern San Joaquin Valley is available in Moratto (Moratto 1984).

Despite the preoccupation with chronological issues in most of the previous research, most suggested chronological sequences are borrowed from other regions with minor modifications based on sparse local data.

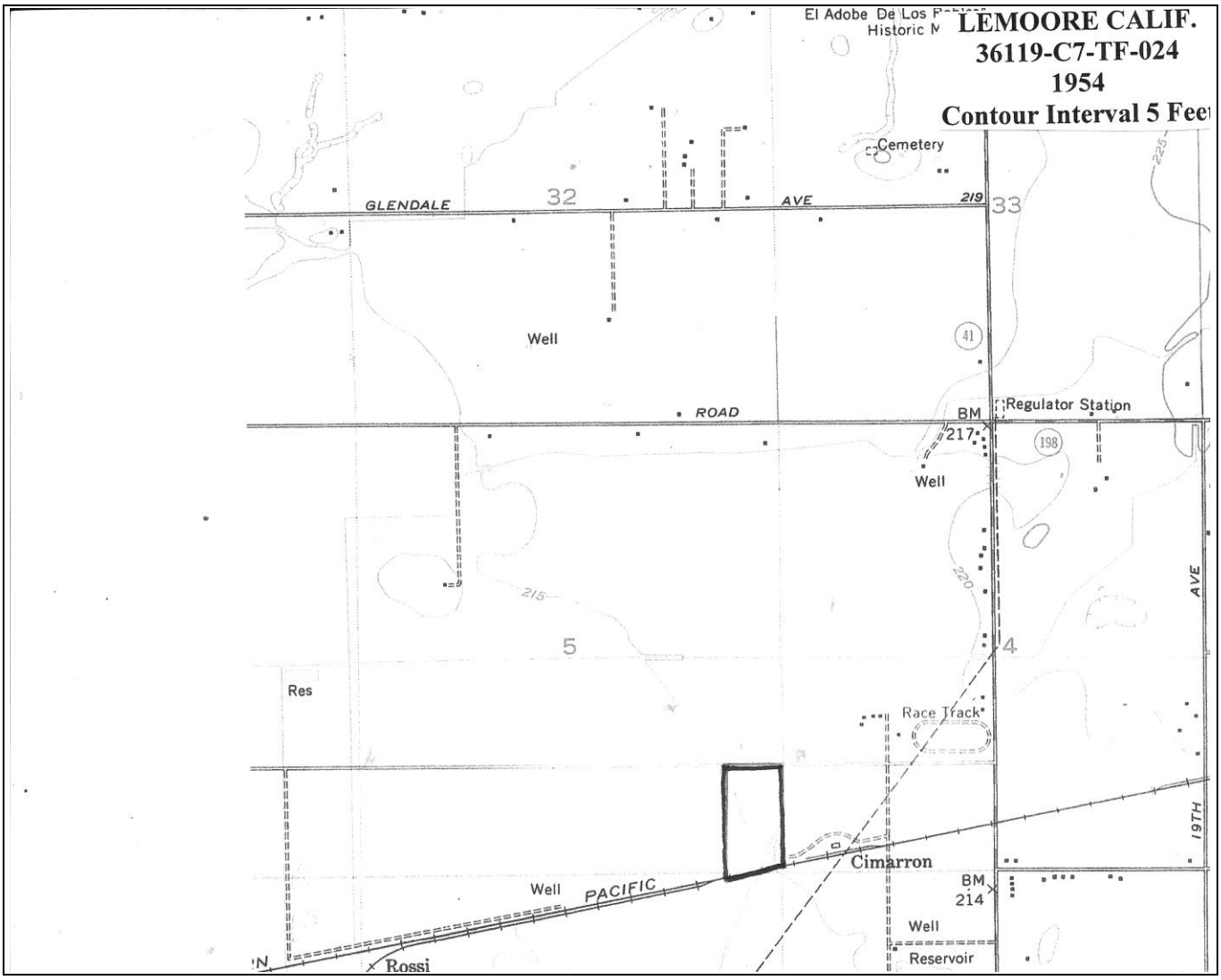

Figure 1
Project Area Location Map

The following chronology is based on Parr and Osborne's Paleo-Indian, Proto-Archaic, Archaic, Post-Archaic periods (Parr and Osborne 1992:44-47). Most existing chronologies focus on stylistic changes of time-sensitive artifacts such as projectile points and beads rather than addressing the socioeconomic factors, which produced the myriad variations. In doing so, these attempts have encountered similar difficulties. These cultural changes are implied as environmentally determined, rather than economically driven.

Paleo-Indians, whom roamed the region approximately 12,000 years ago, were highly mobile individuals. Their subsistence is assumed to have been primarily big game, which was more plentiful 12,000 years ago than in the late twentieth century. However, in the Great Basin and California, Paleo people were also foragers who exploited a wide range of resources. Berries, seeds, and small game were also consumed. Their technology was portable, including manos (Parr and Osborne 1992:44). The paleo period is characterized by fluted Clovis and Folsom points, which have been identified throughout North America. The Tulare Lake region in Kings County has yielded several Paleo-Indian sites, which have included fluted points, scrapers, chipped crescents, and Lake Mojave-type points (Morratto 1984:81-2).

The Proto-Archaic period, which dates from approximately 11,000 to 8,000 years ago, was characterized by a reduction in mobility and conversely an increase in sedentism. This period is classified as the Western Pluvial Lake Tradition or the Proto-Archaic, of which the San Dieguito complex is a major aspect (Moratto 1984: 90-99; Warren 1967). An archaeological site along Buena Vista Lake in southwestern Kern County displays a similar assemblage to the San Dieguito type site. Claude Warren proposes that a majority of Proto-Archaic southern California could be culturally classified as the San Dieguito Complex (Warren 1967). The Buena Vista Lake site yielded manos, millingstones, large stemmed and foliate points, a mortar, and red ochre. During this period, subsistence patterns began to change. Hunting focused on smaller game and plant collecting became more integral. Large stemmed, lancelote (foliate) projectile points represents lithic technology. Millingstones become more prevalent. The increased sedentism possibly began to create regional stylistic and cultural differences not evident in the paleo period.

The Archaic period persisted in California for the next 4000 years. In 1959, Warren and McKusiak proposed a three-phase chronological sequence based on a small sample of burial data for the Archaic period (Moratto 1984:189; Parr and Osborne 1992:47). It is distinguished by increased sedentism and extensive seed and plant exploitation. Millingstones, shaped through use, were abundant. Bedrock manos and metates were the most prevalent types of millingstones (Parr and Osborne 1992:45). The central valley began to develop distinct cultural variations, which can be distinguished by different regions throughout the valley, including Kings County.

In the Post-Archaic period enormous cultural variations began manifesting themselves throughout the entire San Joaquin Valley. This period extends into the contact period in the seventeenth, eighteenth and nineteenth centuries. Sedentary village life was emblematic of the Post-Archaic period, although hunting and gathering continued as the primary subsistence strategy. Agriculture was absent in California, partially due to the dense, predictable, and easily exploitable natural resources. The ancestral Yokuts have possibly been in the valley for the last three thousand years, and by the eighteenth century were the largest pre-contact population, approximately 40,000 individuals, in California (Moratto 1984).

Figure 2
Project Area, View to the Southeast

Figure 3
Project Area, View to the North

6.0 Ethnographic Background

The Yokuts are a Penutian-speaking, non-political cultural group. Penutian speakers inhabit the San Joaquin Valley, the Bay Area, and the Central Sierra Nevada Mountains. The Yokuts are split into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts.

The southern San Joaquin Valley in the Hanford area was home to the Yokuts tribelet, Tachi. The tribelet had approximately 550 people, had a special name for themselves, and spoke a unique dialect of Yokuts. Land was owned, collectively, and every group member enjoyed the right to utilize food resources. The Tachi occupied the area surrounding the now-extinct Tulare Lake (Latta 1999).

The Southern Valley Yokuts had a mixed economy emphasizing fishing, hunting, fowling, and collecting shellfish, roots, and seeds. Fish were the most prevalent resource and was a productive activity throughout the entire year. Fish were caught in many different manners, including nets, conical basket traps, catching with bare hands, shooting with bows and arrows, and stunning fish with mild floral toxins. Geese, ducks, mud hens and other waterfowl were caught in snares, long-handled nets, stuffed decoys, and brushing brush to trick the birds to fly low into waiting hunters. Mussels were gathered and steamed on beds of tule. Turtles and dogs were consumed (Wallace 1978:449-450).

Wild seeds and roots provided a large portion of the Yokuts' diet. Tule seeds, grass seeds, fiddleneck, alfilaria were also consumed. Acorns, the staple crop for many California native cultures, were not common in the San Joaquin Valley. Acorns were traded into the area. Land mammals, such as rabbits, ground squirrels, antelope and tule elk, were not taken often (Wallace 1978:450).

The Yokuts occupied permanent structures in permanent villages for most of the year. During the late and early summer, families left for several months to gather seeds and plant foods, shifting camp locations when changing crops. Several different types of fiber-covered structures were common in Yokuts settlements. The largest was a communal tule mat-covered, wedge-shaped structure, which could house upward of ten individuals. These structures were established in a row, with the village chief's house in the middle and his messenger's houses were located at the ends of the house row. Dance houses and assembly buildings were located outside the village living area (Nabokov and Easton 1989:301).

The Yokuts also built smaller, oval, single-family tule dwellings. These houses were covered with tall mohya stalks or with sewn tule mats. Bent-pole ribs that met a ridgepole held by two crotched poles framed these small houses. The Yokuts also built a cone-shaped dwelling, which was framed with poles tied together with a hoop and then covered with tule or grass. These cone-shaped dwellings were large enough to contain multiple fireplaces (Nabokov and Easton 1989:301). Other structures included mat-covered granaries for storing food supplies, and a dirt-covered, communally owned sweathouse.

Clothing was minimal, men wore a breechclout or were naked. Women wore a narrow-fringed apron. Cold temperatures brought out rabbitskin or mud hen blankets. Moccasins were worn in certain places; however, most people went barefoot. Men wore no

head coverings, but women wore basketry caps when they carried burden baskets on their heads. Hair was worn long. Women wore tattoos from the corners of the mouth to the chin; both men and women had ear and nose piercings. Bone, wood or shell ornaments were inserted (Wallace 1978:450-451).

Tule dominated the Yokut's material culture. It was used for many purposes, including sleeping mats, wall coverings, cradles, and basketry. Ceramics are uncommon to Yokuts culture as is true throughout most California native cultures. Basketry was common to Yokuts culture. Yokuts made cooking containers, conical burden baskets, flat winnowing trays, seed beaters, and necked water bottles. Yokuts also manufactured wooden digging sticks, fire drills, mush stirrers, and sinew-backed bows. Knives, projectile points, and scraping tools were chipped from imported lithic materials including obsidian, chert, and chalcedony. Stone mortars and pestles were secured in trade. Cordage was manufactured from milkweed fibers, animal skins were tanned, and awls were made from bone. Marine shells, particularly olivella shells, were used in the manufacture of money and articles of personal adornment. Shells were acquired from the Chumash along the coast (Wallace 1978:451-453).

The basic social and economic unit was the nuclear family. Lineages were organized along patrilineal lines. Yokuts fathers transmitted totems, particular to each paternal lineage, to each of his children. The totem was an animal or bird that no member would kill or eat and that was dreamed of and prayed to. The mother's totem was not passed to her offspring; but was treated with respect. Families sharing the same totem formed an exogamous lineage. The lineage had no formal leader nor did it own land. The lineage was a mechanism for transmitting offices and performing ceremonial functions. The lineages formed two moieties, East and West, which consisted of several different lineages. Moieties were customarily exogamous. Children followed the paternal moiety. Certain official positions within the villages were associated with certain totems. The most important was the Eagle lineage from which the village chief was appointed. A member of the Dove lineage acted as the chief's assistant. He supervised food distribution and gave commands during ceremonies. Another hereditary position was common to the Magpie lineage, was that of spokesman or crier.

7.0 Historical Overview

Kings County was formed from Fresno County in 1893; however, it was settled in the 1850s, soon after California joined the United States after the passage of the Compromise of 1850. The Compromise of 1850 allowed California to join the Union as a free state even though a major portion of the state lied beneath the Missouri Compromise line; and was potentially subject to southern settlement and slavery. Americans had long been visiting and working in California prior to the admission of California into the Union.

The European settlement of California began in 1769, after the Spanish moved north from Baja California into Alta California. Father Junipero Serra, a Franciscan friar founded Mission San Diego de Alcala, beginning California active European settlement. However, Spanish mission efforts were focused on California's coastal regions. Spanish exploration of the San Joaquin Valley region begins in the 1770s. In 1772, Pedro Fages arrived in the San Joaquin Valley searching for army deserters. Father Francisco Garces, a Franciscan priest, soon visited the vicinity in 1776. The Spanish empire collapsed in 1820; Spain's former Central and South American colonies became independent nations. As a result, California became Mexican

territory. California stayed in Mexican hands until the Mexican-American War. Mexican California remained a coastal society with little interest in settling in California's hot, dry interior valleys.

American exploration of the San Joaquin Valley begins in the 1820s with Jedediah Smith, Kit Carson, and Joseph Walker looking for commercial opportunities. The United States government began exploring California in the 1830s. Soon, the Americans will be searching for intercontinental railroad routes to link the eastern and western halves of the continent.

The defeat of the Mexicans during the Mexican-American War and the subsequent discovery of gold will drastically alter the complicated political realities of the west. The Mexican-American War was ostensible fought to settle a boundary dispute with the Mexicans over the western boundary of the newly-annexed state of Texas, which had fought a successful rebellion against the Mexican Army in the mid 1830s. The Republic of Texas was an independent country for nine years until Texas was annexed by the United States in 1845. One major outcome of the Mexican-American War was that Mexico rescinded its claims to much of the American southwest. In 1848 these territories were folded into the United States, including California.

In January 1848, the discovery of gold in Coloma, California changed the settlement of California, forever. In the summer of 1848, when the gold strike was publicly announced, the overnight settlement of California began. The Mexican population of California was small and limited to the coasts and a few of southern California's interior valleys. A sizable native population settled the remainder of California; Fresno County was Yokuts territory. The Gold Rush tipped the balance of native communities throughout California, as many of California's natives were decimated.

In 1856, Fresno County was created from the northern half of Tulare County. The original county seat was at Millerton. The west side of Fresno County was largely the northern half of Tulare Lake, which no longer exists, due to farming and damming of the rivers, which fed the lake. Settlement of the western portion of Fresno County was abetted by the arrival of the Southern Pacific (SP) Railroad in 1877. The Southern Pacific was originally built from San Francisco to Bakersfield. The Hanford townsite was named for the SP paymaster, James Madison Hanford, who was originally from New York. Hanford made his way to California during the Gold Rush. The city of Hanford was oriented along the rail line. Hanford was incorporated in 1891; and became the county seat of Kings County in 1893.

Hanford sits at the center of a rich agricultural region, farming the former Tulare Lake basin and the region. Farmers and cattle ranchers settled the valley. Wheat was originally the major agricultural crop. H.G. Lacey built an early flour processing mill in Hanford. Cattle ranchers and shepherds grazed their animals throughout the region until 1903, when the laws changed.

8.0 Field Procedures and Methods

On February 2, 2021, Scott M. Hudlow (for qualifications see Appendix I) conducted a pedestrian archaeological survey of the entire proposed project area. Hudlow surveyed in north/south transects across the entire lot in 10-meter (25 feet) intervals. All archaeological

material more than fifty years of age or earlier encountered during the inventory will be recorded. Site and isolate forms would be completed, artifacts and maps would be drawn.

9.0 Report of Archaeological Findings

No archaeological resources were identified.

10.0 Management Recommendations

At the request of Helena Agri-Enterprises, a Phase I Cultural Resource Survey was conducted on an approximate thirty-one-acre parcel, located at Industry Parkway, City of Lemoore, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

11.0 References

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Love, Bruce and Bai "Tom" Tang
2002a *Archaeological Survey Report: Cross Valley Rail Corridor Project Between the Cities of Visalia and Huron Tulare, Kings, and Fresno Counties, California.* Report on file, Southern San Joaquin Archaeological Information Center, California State University, Bakersfield, Bakersfield, California.

2002b *Historic Study Report/Historical Resources Evaluation Report: Cross Valley Rail Corridor Project Between the Cities of Visalia and Huron Tulare, Kings, and Fresno Counties, California.* Report on file, Southern San Joaquin Archaeological Information Center, California State University, Bakersfield, Bakersfield, California.

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1992 *Route Adoption Study for Highway 58, Kern County, California.* Report on file, Southern San Joaquin Archaeological Information Center, California State University, Bakersfield, Bakersfield, California.

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1959 A Burial Complex from the southern San Joaquin Valley. Los Angeles: *University of California, Los Angeles, Archaeological Survey Annual Report, 1959*: 17-26.

Warren, Claude N.
1967 "The San Dieguito Complex: A Review and Hypothesis" *American Antiquity* 32(2): 168-185.

Appendix I

Scott M. Hudlow
1405 Sutter Lane
Bakersfield, California 93309
(661) 834-9183

Education

The George Washington University
M.A. American Studies, 1993
Specialization in Historical Archaeology
and Architectural History

University of California, Berkeley
B.A. History, 1987
B.A. Anthropology, 1987
Specialization in Historical Archaeology
and Colonial History

Public Service

3/94-12/02 *Historic Preservation Commission.* City of Bakersfield, Bakersfield, California 93305.

7/97-12/01 *Newsletter Editor. California History Action,* newsletter for the California Council for the Promotion of History.

Relevant Work Experience

8/96- *Adjutant Faculty.* Bakersfield College, 1801 Panorama Drive, Bakersfield, California, 93305. Teach History 17A, Introduction to American History and Anthropology 5, Introduction to North American Indians.

Owner, Sole Proprietorship. Hudlow Cultural Resource Associates. 1405 Sutter Lane, Bakersfield California 93309. Operate small cultural resource management business. Manage contracts, respond to RFP's, bill clients, manage temporary employees. Conduct Phase I archaeological and architectural surveys for private and public clients; including the cultural resource survey, documentary photography, measured drawings, mapping of structures, filing of survey forms, historic research, assessing impact and writing reports. Evaluated archaeological and architectural sites and properties in lieu of their eligibility for the National Register of Historic Places in association with Section 106 and 110 requirements of the National Historic Preservation Act of 1966 and CEQA (California Environmental Quality Act).

Full resume available upon request.

Appendix II

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 2, 2021

Jaymie Brauer
Quad Knopf, Inc.

Via Email to: jaymie.brauer@qkinc.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Helena Agri-Business Major Site Plan Review, Kings County

Dear Ms. Brauer:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

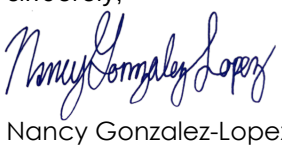
Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,



Nancy Gonzalez-Lopez
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
March 2, 2021

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fedora Avenue — Foothill Yokuts
Fresno , CA 93726 — Choinumni
(559) 647-3227 Cell

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokuts
Salinas , CA 93906 — Mono
kwood8934@aol.com — Wuksache
(831) 443-9702

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8 — Tache
Lemoore , CA 93245 — Tachi
Yokut
(559) 924-1278

Table Mountain Rancheria
Brenda D. Lavell, Chairperson
P.O. Box 410 — Yokuts
Friant , CA 93626
rpennell@tmr.org
(559) 822-2587

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410 — Yokuts
Friant , CA 93626
rpennell@tmr.org
(559) 325-0351
(559) 217-9718 - cell

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 — Yokuts
Porterville , CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed: Helena Agri-Business Major Site Plan Review, Kings County.

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

2/8/2021

Scott M. Hudlow
Hudlow Cultural Resource Associates
1405 Sutter Lane
Bakersfield, CA 93309

Re: Helena 21-01
Records Search File No.: 21-045

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Lemoore USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.5 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Resources within project area:	P-16-000122
Resources within 0.5 mile radius:	P-16-000272
Reports within project area:	KI-00110, 00111
Reports within 0.5 mile radius:	KI-00019, 00028, 00037, 00039, 00140, 00191, 00230

Note: Mapped report locations were not included per the Data Request Form.

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	☒ not requested	☐ nothing listed
OHP Built Environment Resources Directory:	☐ enclosed	☒ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☒ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see https://www.slc.ca.gov/shipwrecks/

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Digitally signed by Celeste M. Thomson
Date: 2021.02.08 10:07:58 -08'00'

Celeste M. Thomson
Coordinator

APPENDIX C

TRAFFIC EVALUATION

RUETTGERS & SCHULER CIVIL ENGINEERS

1800 30th Street, Suite 260
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February 18, 2021

635-02
Electronic Mail

Gareth Davis
Helena Agri-Enterprises, LLC
7576 N. Ingram Ave., Suite 101
Fresno, CA 93711

REF: Traffic Investigation and VMT Evaluation for Proposed New Facility on West Industry Way West of Bell Haven Drive

Dear Mr. Davis:

This letter is in response to your request for a traffic investigation and vehicle miles traveled (VMT) evaluation for a proposed new Helena Agri-Enterprises facility in Lemoore.

The project as planned, is anticipated to be constructed in two phases as described in the Project Description/Operational Use document. Operation of the site would generally involve the storage, blending and delivery of liquid and dry fertilizer. Materials will be delivered via rail and trucks. The facility will operate Monday through Friday 6:30 AM to 5:00 PM, and Saturday from 6:30 AM to 12:00 PM.

Trip Generation

Estimates of average daily traffic (ADT) volumes generated by the proposed project are presented in the narrative and tables below. The project is a specialized use and does not fall into any of the categories listed in the ITE Trip Generation Manual. Therefore, project trip generation was calculated based on detailed employment and delivery information supplied by the applicant.

It is anticipated that the facility will employ approximately 22 employees during weekday operations and approximately 16 on Saturday. In addition, there will be approximately 35 heavy truck deliveries on weekdays and 26 on Saturday.

It is anticipated that the facility would employ approximately 22 employees during weekday operations and approximately 16 on Saturday. In addition, there would be approximately 35 heavy truck deliveries on the weekdays, and 26 on Saturdays.

Table 1 shows project trip generation during Monday through Friday. Table 2 shows project trip generation for Saturday. Peak hour trips assumed that all employees would arrive and depart during the morning and evening project peak hours, respectively. Heavy truck trips were assumed to be spread throughout the workday.

Table 1
Project Trip Generation (Weekday)

General Information	Weekday Daily Trips		Weekday AM Peak Hour Trips		Weekday PM Peak Hour Trips	
Traffic Type	Variable	ADT	In % Split/ Trips	Out % Split/ Trips	In % Split/ Trips	Out % Split/ Trips
Employees	22	68	22	2	2	22
Heavy Duty Trucks	35	70	4	4	4	4
Total Trips		**138**	**26**	**6**	**6**	**26**

Table 2
Project Trip Generation (Saturday)

General Information	Saturday Daily Trips		Saturday AM Peak Hour Trips		Saturday PM Peak Hour Trips	
Traffic Type	Variable	ADT	In % Split/ Trips	Out % Split/ Trips	In % Split/ Trips	Out % Split/ Trips
Employees	16	50	16	2	2	16
Heavy Duty Trucks	26	52	3	3	3	3
Total Trips		**102**	**19**	**4**	**4**	**19**

Trip Distribution Evaluation

The project trip distribution shown on Figures 1 and 2 represent the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers (employees) and transportation facilities to potential delivery locations (heavy trucks).

The City of Lemoore utilizes the Caltrans "Guide for the Preparation of Traffic Impact Studies", dated December 2002, as the guideline for determining the threshold condition for requiring an analysis of traffic impacts. The guide indicates that the minimum condition for requiring a traffic analysis is the addition of 50 project trips to one or more intersections during the peak

hour of adjacent street traffic. The peak hour of adjacent street traffic typically occurs on a weekday during the AM or PM peak hour for commuter traffic.

As shown on the project turn movements on Figures 1 and 2, the peak hour volume is less than 50 trips at the intersection of West Industrial Way and Belle Haven Drive. Therefore, being below the threshold to require analysis, no significant traffic impacts are anticipated due to trips attributable to the project.

Vehicle Miles Traveled (VMT) Evaluation

An evaluation of vehicles miles traveled (VMT) was conducted based on applicable California Environmental Quality Act (CEQA) guidelines. The evaluation involved reviewing VMT attributable to the proposed project and assessing whether such "project VMT" would result in a significant transportation impact.

Guidelines for assessing project VMT as part of a transportation impact analysis under CEQA are contained in the State of California, Office of Planning and Research's "Technical Advisory on Evaluating Transportation Impacts in CEQA," dated December 2018. This advisory includes methodology recommendations for analyzing project VMT, including the following regarding vehicle type (page 4).

> **Vehicle Types.** Proposed (CEQA Guideline) Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks.

The proposed project would result in an increase in both heavy truck trips and passenger vehicle trips (employees). Based on the excerpt above, only the passenger vehicle trips would be subject to VMT analysis under CEQA. The Technical Advisory also contains screening thresholds for identifying whether a land use project should be expected to result in a less than significant transportation impact under CEQA. One such threshold pertains to project size. According to the Advisory, a project that generates fewer than 110 trips per day may be assumed not to cause a significant transportation impact.

As shown in Tables 1 and 2, the number of daily passenger vehicle (employee) trips generated by the project during the week (68) and on Saturday (50) satisfy the small project screening threshold. Therefore, the project is anticipated to have a less than significant transportation impact.

Summary

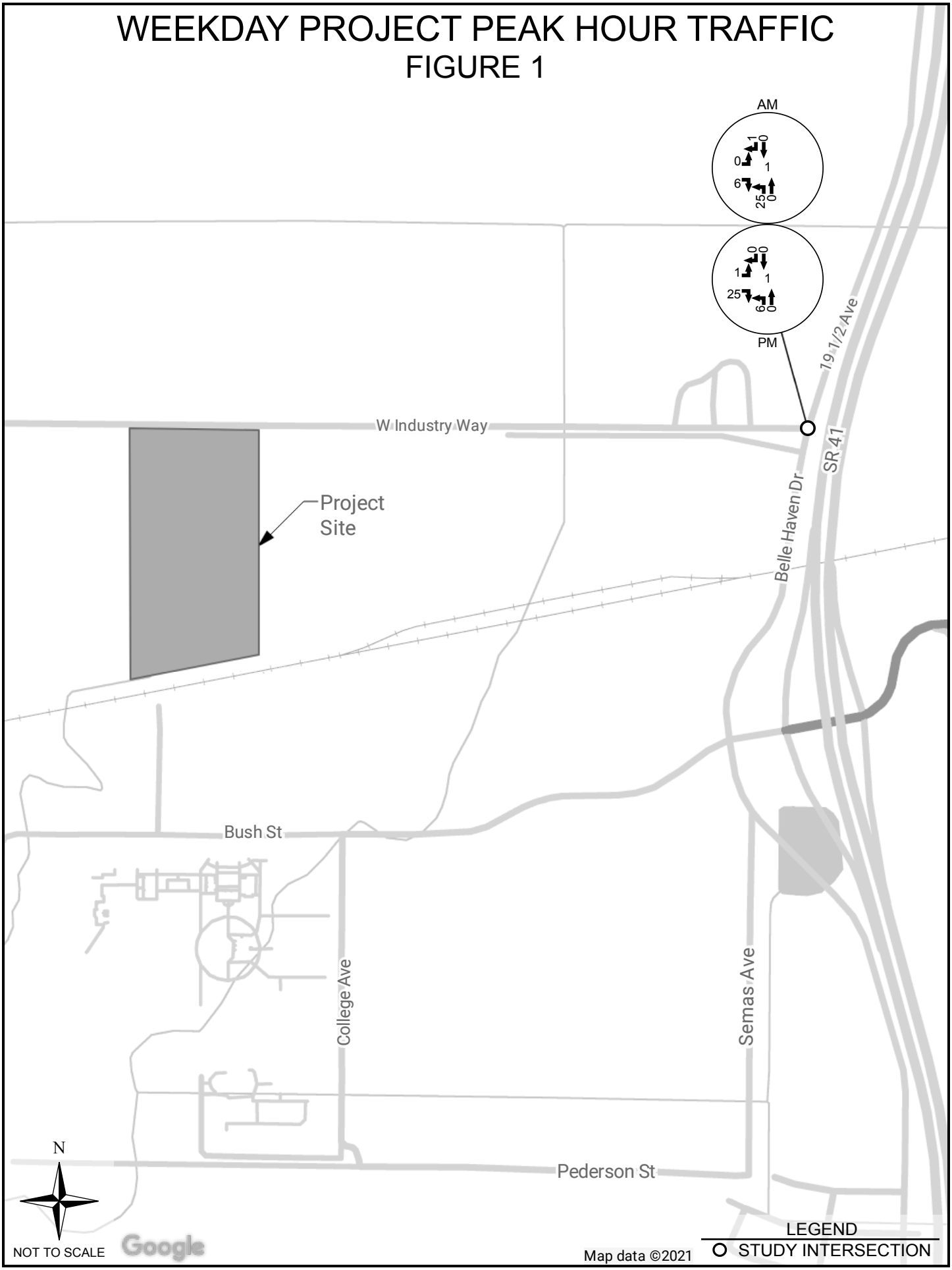
In summary, for both level of service and vehicle miles travelled, the project is screened out from further analysis and will have less than significant transportation impacts.

Please contact me should you have any questions.

Very truly yours,

Ian J. Parks
RCE #58155

WEEKDAY PROJECT PEAK HOUR TRAFFIC
FIGURE 1



SATURDAY PROJECT PEAK HOUR TRAFFIC
FIGURE 2