

Orland Power Solutions
Borges Dairy Digester Project
Borges Dairy, San Joaquin County,
California



Use Permit Application PA-2500075
Project Description and Environmental Analyses

Prepared for:

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1. Project Information

Project Title: The Orland Power Solutions Borges Dairy Digester Project

Use Permit Application: PA-2500075

Project Location: Assessor Parcels: APN 257-22-005 and 257-22-004, 8350 Brady Rd., Manteca, CA

General Plan Designation: A/G – General Agriculture

Zoning: AG-40 – General Agriculture with 40-acre parcels

Lead Agency

San Joaquin County Department of Community Development,
Planning Division
1810 E. Hazelton Ave.
Stockton, CA 95205
Contact: Stephanie Stowers
sstowers@sjgov.org

Property Owner's Name and Address

Borges Dairy Farm
Frank Borges
2830 Brady Road
Manteca, CA 95337

Project Sponsor's Name and Address

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Project Purpose: The purpose of this project is to construct and operate a commercial proof of concept anaerobic digestion facility by configuring two above-ground cow manure "digesters" that work in a "plug and flow" fashion. These digesters are intended to capture and contain methane (a.k.a biomethane) from the dairy cow manure currently stored in the regulatory compliant excrement "ponds" on the dairy property. The biomethane will then be shipped offsite in tube trailers from consumption by product off-takers.



Existing Site Conditions: The project is proposed for Frank Borges Dairy, an approximately 1500-head dairy farm that is located at 8350 E. Brady Road in Manteca, CA and has been in operation for over 60 years. The location of the proposed project on the dairy farm is midway between E. Brady Road (to the north) and Hutchinson Road (to the south). The dairy structures are located on two parcels: 257-22-005, 29.85 acres, and 257-22-004 with 48.95 acres; however, the project will only affect approximately 2.9 acres and be sited on 257-22-004.

Surrounding Uses and Conditions: The surrounding land uses are agricultural, with dairies, farmland, and orchards. These lands are considered prime farmland and lands of statewide importance. The land on which the Borges is located is designated as Confined Space Agriculture.

North: Agricultural with scattered residences/City of Manteca
 South: Agricultural with scattered residences/Stanislaus River
 East: Agricultural with scattered residences/City of Ripon
 West: Agricultural/Dairy Facility/scattered residences/San Joaquin River

Site Plans and Structures: The proposed project is the construction of two commercial proof of concept anaerobic digesters (AD) within four-sided, open-top, above ground containment units located on the eastern side of the dairy. These two AD units will be located on parcel 257-22-004, with the manure feedstock coming from parcel 257-22-005. The footprint of the AD project is approximately 2.9 acres.

The two identical containment structures are intended to be 40 feet wide by 180 feet long comprising 7,200 square feet each. The structures will be 12.5 feet in height with a concrete base in which the AD consisting of a heavy mil rubber bladder will be situated. The containment structures will be created using off-the-shelf branded "Fox Blocks" that consist primarily of rebar and concrete that are commercially available and have been validated as structurally sound and watertight and provide R40 insulation factor. Combined with the internal bladder the concrete structures serve as a double liner in compliance with current containment regulations. In addition, there will be a third external bladder to be used as emergency methane gas containment in lieu of a combustion flare, which otherwise would have essentially burned the biogas and create associated negative environmental impact.

The AD system will be developed on an existing, approximately 2.9-acre engineered pad which will be used for construction and development purposes. There will also be associated biogas conditioning and treatment equipment to upgrade and "clean" the biogas to biomethane along with the AD systems.

Operations: Manure wastewater from the preexisting regulatory compliant lagoons and manure pit on the dairy property will be pumped approximately 100 yards into the digester bladders via a non-combustion based flush pump system and the manure wastewater will be heated by an electric boiler. The biogas output from the AD bladders will be upgraded into biomethane (a.k.a. Renewable Natural Gas – RNG) then compressed and loaded gas transport trucks with tube trailers for delivery to a natural gas pipeline receipt point or end-user(s).



In the event of some type of upset condition from the bladder, any released manure wastewater will be diverted from the secondary concrete containment structure directly back to the original manure containment ponds with the aid of an electricity driven pump. While the property will continue to be fully operated by the dairy owner/operator, the construction and operation of the digester facilities and project will be undertaken by Orland Power Solutions. There are no systems in this project that rely on the combustion of the biogas or biomethane, thus no combustion-related emissions.

Transportation and Circulation: The gas transport tanker trucks will transport from the dairy on E. Brady Road to the 2-lane (transitioning to the north into 4-lanes) main Manteca Road thoroughfare. It will then be driven approximately seven miles to the main CA-99 or less than two miles to the CA-120 highway for transport to an approved injection site or end-user customer(s). It is anticipated that there will be up to 12 truck trips per month when the project becomes fully operational. Each truck will contain 500 thousand cubic feet (MCF) per truck and tube trailer. These are Class 8 trucks on the order of the same weight as a standard large milk truck and trailer of raw milk produced each day at the Borges Dairy. Access to the digester project area will be from E. Brady Road on a 700-foot compacted and gravel access road.

Other Public Agencies Whose Approval May be Required (e.g., permits, financing approval or participation agreement)

San Joaquin County Building Department
San Joaquin County Environmental Health
San Joaquin Valley Air Pollution Control District
State of California, Central Valley Regional Water Quality Control Board

1.1 Project Description

1.1.1 Overview

The purpose of this construction is to develop a commercial proof of concept project by configuring two above-ground cow manure "digesters" that work in a "plug and flow" fashion. They are intended to capture and contain methane from the dairy cow manure that currently and in the future resides in the existing regulatory compliant excrement "ponds" on the dairy property. The dairy digester site will be located on the easternmost parcel of (APN 257-22-004) of the Borges Dairy, which consists of approximately 49 acres. The western parcel of the dairy will only be impacted by the project for the creation of an approximately 100-yard pipeline from the manure pit to the digesters. Access to the site will be from E. Brady Road north of the dairy. The parcel is designated A/G-General Agriculture and zoned AG-40 – General Agriculture with 40-acre parcels in the San Joaquin County General Plan. This designation seeks to enhance the economic viability of the agriculture sector and encourage new support industries and operations. The agricultural zoning allows the development and operation of a dairy digester if a Conditional Use Authorization is approved by San Joaquin County.



1.1.2 Location and Project Background

The proposed dairy digester will be located on the Borges Dairy at 8350 E. Brady Road in Manteca, CA. The site property is currently owned by Frank Borges and has been in operation for over 60 years. It will be located about 4 miles west of Ripon and 2.5 miles south of the Manteca city limits. It is adjacent to E. Brady Road, about a half mile east of the intersection with Manteca Road. Nearby roads and the approximate location of the facility are shown in Figure 1-1.



Figure 1-1: General Location of the Borges Dairy.





The surrounding uses are primarily agricultural, with dairies, farmland and orchards the primary uses. These lands are considered prime farmland and lands of Statewide Importance. There are a few residences nearby associated with agricultural operations. There is a small FM station located a few hundred yards east of the project site. (Figure 1-2, Project Site Vicinity).

The proposed project is the development and construction of two commercial prototypes above ground anaerobic digesters with 4-sided open, above ground air concrete container units. The two identical structures are intended to be 40 feet wide by 180 feet long thereby measuring 7,200 feet square each and will be 12.5 feet in height with a concrete base and contained within an engineered rubber bladder fitting the space thereby created. The structures will be created using off-the-shelf branded "Fox Blocks" that consist primarily of rebar and concrete that are commercially available and have been validated as structurally sound and watertight and provide R40 insulation factor. Combined with the internal bladder the concrete structures serve as a double liner in compliance with current containment regulations. In addition, there will be a third bladder to be used as methane gas containment in the event that access to the two main bladders is interrupted due to maintenance requirements, or some failure or blockage to the two main bladders. Construction and development of this AD system will occur on an existing approximately 2.9-acre compacted dirt pad. A complete set of project drawings is found in Appendix A.

Manure wastewater from the pre-existing manure pit will be pumped approximately 100 yards into the digester bladders via a non-combustion-based flush pump system. The biogas output from the bladders shall be "cleaned" into a biomethane product (CO₂ and H₂S and other contaminants removed from the gas stream) with non-combustion-based equipment and placed into bonded and insured gas transport trucks with tube trailers. While the property will continue to be fully operated by the dairy owner/operator, the construction and operation of the digester facilities and project will be undertaken by Orland Power Solutions.

The gas transport tanker trucks would transport the biogas from the dairy less than one-mile along E. Brady Road, which is a paved semi-private road to the 2-lane main Manteca Road thoroughfare to the west of the project site. E. Brady Road dead-ends to the east of the site at Kincaid Road. It will then be driven approximately seven miles to the main CA-99 or less than two miles to the CA-120 highway for transport to an approved injection site or end-user customers. It is anticipated that there will be up to 12 truck trips per month when the project becomes fully operational.

Figure 1-3 shows the overall project layout, comprising 2.9 acres east of the existing operations. The operation would include the extraction of 25,000 gallons per day of liquefied manure with the same amount of digestate returned to the manure pond. It is expected that the digester will produce 200 MCF (one thousand cubic feet) per day of biogas after H₂S (hydrogen sulfide) and CO₂ (carbon dioxide) are removed. Figure 1 - 4 displays the principal layout of the AD system which conforms to Figure 1 -3.

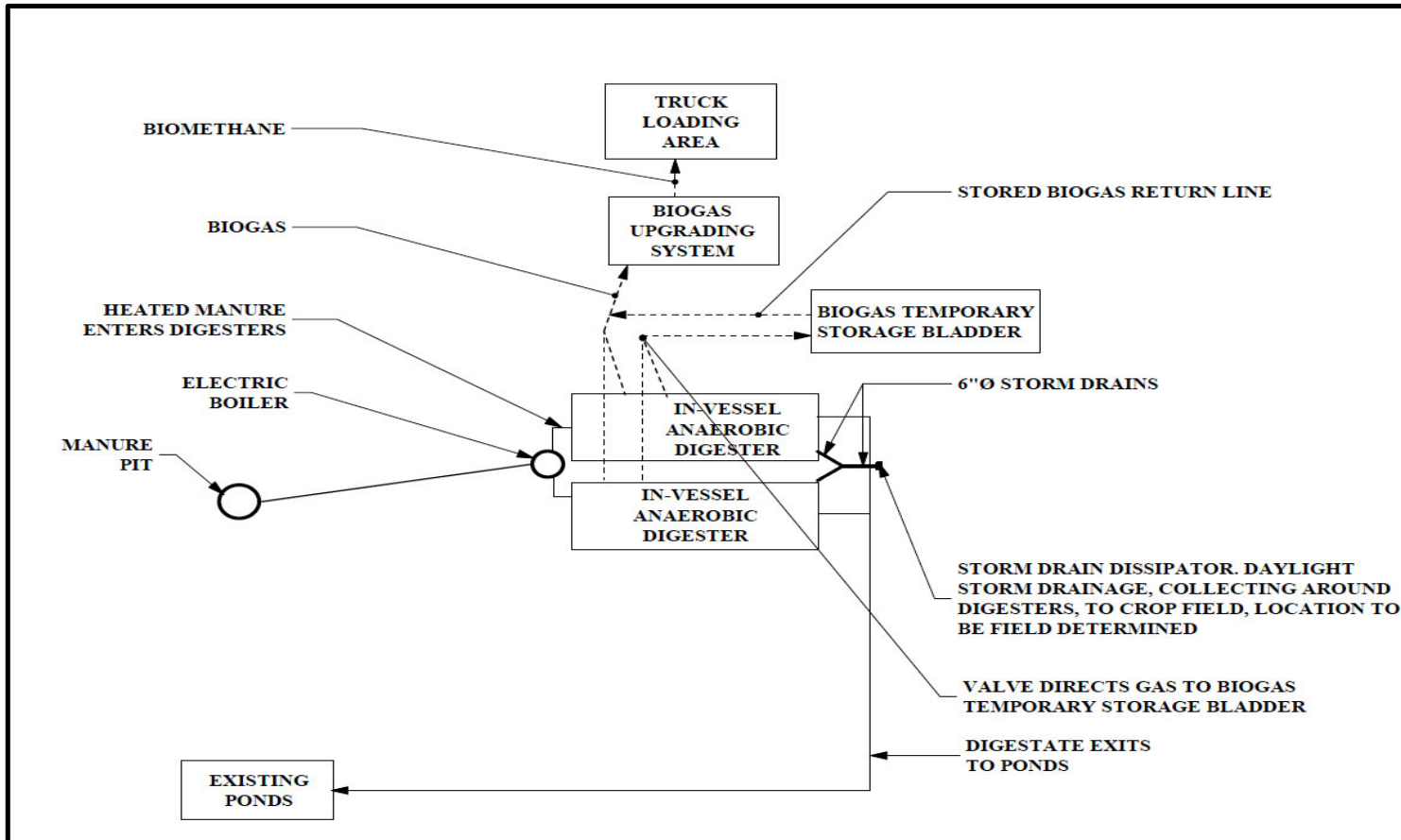


Figure 1-2: Project Site Vicinity





Figure 1-4: Dairy Digester Process Diagram





1.1.3 Site, Buildings, and Equipment

Site components in Figure 1-3 include the construction of the following:

- A 15,600 sq. ft. digester pad;
- Two in-vessel anaerobic digesters using dairy cow manure as feedstock;
- An electric boiler to heat up the manure slurry before entering the digesters;
- The manure pipeline into the digesters;
- A biogas to biomethane upgrading/cleaning & compression system;
- A temporary biogas storage bladder for emergency and non-routine upset conditions in a digester;
- A digestate (remains of the digested dairy cow manure) pipeline from the digesters to an existing manure pond;
- Valves directing the produced biomethane gas to processing trailer or biogas to temporary biogas storage bladder.

1.1.4 Roadways and Trucks

The project site is located on E. Brady Road, which intersects Manteca Road approximately 3,850 feet to the west, which provides north-south access. To the north 3.75 miles, Manteca Road connects to Highway 120, which links to I-5 and Highway 99 for access throughout California.

Figure 1-5: E. Brady Road Along Northern Boundary of the Project Site





For access eastward, Ripon Road—approximately a quarter mile north of the site—leads to the City of Ripon and then to Highway 99.

Southern access is found by using Airport Way south across the Stanislaus River. Access to the west is restricted by the San Joaquin River but can be achieved using Airport Way with access to Highway 120 to the north or highway 132 to the south.

Up to 12 truckloads per month (Monday through Friday) are expected to load with Renewable Natural Gas (RNG) and export to the surrounding area. The proposed project will require 1.5 employees, generating 3 round-trip employee commute trips each day.



2. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and corresponding discussion on the following pages:

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings |

2.1 Determination

(To be completed by the Lead Agency)

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 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL 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 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.

Signature:

Printed Name:

Date:

Title:



3. Purpose of this Initial Study

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the Conditional Use Authorization for the Orland Power Solutions Anaerobic Dairy Digester Project, as proposed, may have a significant effect upon the environment. Based upon the findings contained within this report, the Initial Study will be used in support of the preparation of a Mitigated Negative Declaration.

REFERENCES AND SOURCES FOR DETERMINING ENVIRONMENTAL IMPACTS:

Original source materials and maps on file in the Community Development Department including: All County general plans and community plans; assessor parcel books; various local and FEMA flood zone maps; service district maps; maps of geologic instability; maps and reports on endangered species as well as the San Joaquin County Habitat Conservation Plan; noise calculations; specific roadway plans; maps and/or records of archeological/historic resources; soil reports and maps; etc.

Many of these original source materials have been collected from other public agencies or from previously prepared CEQA and other technical studies. Additional standard sources which should be specifically cited below include on-site visits by staff (notes, date); staff knowledge or experience; and project information and any environmental studies submitted to the County as part of the project land use application. Copies of the project information and reports can be found by contacting the Community Development Department and are also found in the San Joaquin Online Permitting System (PA-2500075).



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 project-specific screening analysis).
- 2) All answers must consider 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 Section XVII, "Earlier Analyses," 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.
 - 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, development code). 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 significance.

4.1 Aesthetics

Aesthetics	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



4.1.1 Setting

San Joaquin County is set within the greater San Joaquin Valley, with the delta and large expanses of generally flat, agricultural lands and urban development framed by the foothills of the Diablo Range to the west and the foothills of the Sierra Nevada to the east. According to the County's General Plan 2035, scenic resources within the County include agricultural expanses, waterways, hilltops, and oak groves.

The project site is located in an agricultural area of intensive use, which includes field crops, orchards dairies and related ag businesses. The existing dairy is located on E. Brady Road, approximately 3 miles from the San Joaquin River and 2 miles north of the Stanislaus River and Caswell Memorial State Park. It's located on a 444.68-acre parcel, in a generally flat area, surrounded by agricultural uses and scattered residences. It is currently the site of the Borges Dairy which has been in continuous operation for greater than 60 years. This area of the project location is clear of vegetation and is used for parking equipment.

Figure 4-1: E. Brady Road from West to East in Front of Borges Dairy



Figure 4-2: Access Road to Digester Project Area



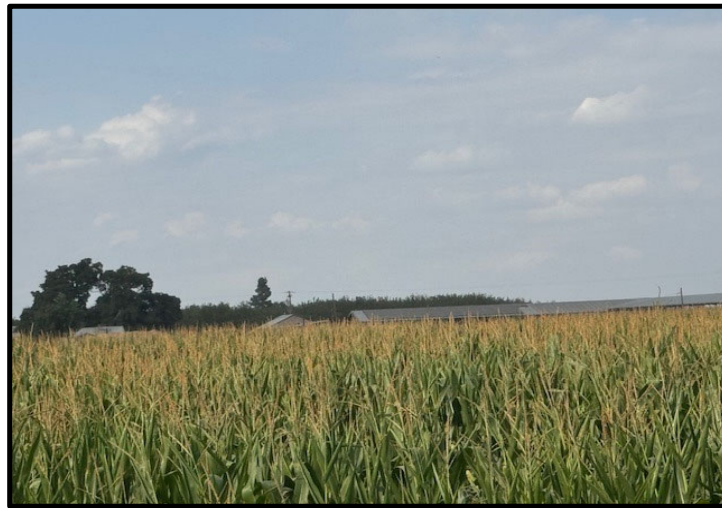


4.1.2 Impact

- a) The project would expand the developed area of the parcel with approximately 2.5-acres of structures and equipment. Although the viewshed that the project site is located within contains expansive views of agricultural lands, the project site is already developed as a parking lot, and the adjacent areas are used to support a dairy.

As the expansion is unlikely to further affect any local scenic resources as the height of the project structures will not exceed that of the surrounding buildings and equipment. Therefore, the project would have a less-than-significant impact associated with scenic vistas.

Figure 4-3: View of Dairy from Southern Boundary



- b) There are two officially designated state scenic highways in San Joaquin County: I-580 and I-5 (County of San Joaquin 2035 General Plan). I-580 is located approximately 11 miles southwest of the project site. I-5 is located approximately 7 miles west of the project site. Due to distance, the project site is not visible from I-580 or I-5.

In addition, the County has designated 26 roadways within the County as local scenic routes (County of San Joaquin 2035 General Plan). The nearest locally designated scenic route is Austin Road, located approximately 2.5 miles east of the project site, which, due to distance, does not have a view of the project site. Therefore, the project would have a less than-significant impact associated with scenic resources within a state- or locally designated scenic highway.

- c) The property parcels on which the footprint of the project will be located are approximately 79 acres in size and are located in a topographically flat area surrounded by agricultural uses and scattered residences. The existing dairy is developed on the south side of Brady Road on about an approximately 23-acre portion of the parcels. The 2.5-acre project is low to the ground and the



structures are consistent with other structures in the vicinity. Therefore, it will not substantially degrade the existing visual character or quality of the site and its surroundings.

- d) The existing lighting and glare conditions in the project area are typical of a rural agricultural area. Any new lighting would consist of downward-facing, photo-sensor security lighting at all locations that are serviced at night. The project’s structures will not have any surfaces that will emit glare, e.g., shiny metal or glass. Therefore, the project is expected to have a less than significant impact from new sources of light or glare on day or nighttime views in the area.

4.1.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.1.4 Conclusion

Based on the impact discussion above, potential impacts associated with aesthetics would be less than significant; therefore, no mitigation is required.

4.2 Agriculture and Forest Resources

Agriculture and Forest Resources Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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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 non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|



Agriculture and Forest Resources Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.2.1 Setting

The project site is located in an agricultural area of San Joaquin County. The project site is entirely owned by Frank Borges.

The site and accompanying parcels are used for a dairy and supporting crops. The surrounding area includes orchards, row crops and other dairies (See Figure 1-4: Project Site Vicinity). The portions of the project parcel utilized by the dairy and planned for the digester and biogas facility is designated as Confined Space Agriculture on maps provided by the California Department of Conservation's Farmland Mapping and Monitoring Program.

The project site is zoned AG-40 (General Agriculture, 40 acre minimum). San Joaquin County classifies a digester and biogas facility as Agricultural Waste and Utility Services - Major uses. The parcels are under Williamson Act contract.

There are no forest resources or zones for forestlands or timberland, as defined by Public Resources Code and Government Code, located on or near the project site.



4.2.2 Impact

- a) The project will take advantage of an existing, gravel and soil packed parking lot so it will not have an impact on the conversion of Prime Farmland, Unique Farmland, or Farmland of State Importance to non-agricultural use.
- b) Both a digester and biogas facility may be conditionally permitted in the AG-40 zone with an approved Site Approval application, therefore, the project will not conflict with existing zoning. The project would result in no impact on Williamson Act contracts or on existing agricultural uses. The parcels are currently under Williamson Act contract and are subject to the provisions of the contract which restrict development to uses that are compatible with the Williamson Act. Pursuant to San Joaquin County Development Title Series 700, Chapter 9-702.060(b)(1)(R) – Renewable Energy, the project use is compatible under a Williamson Act contract. Therefore, the project will not conflict with existing zones or the Williamson contracts on the project parcels.
- c) There are no forest resources or zoning for forestlands or timberland, as defined by Public Resources Code and Government Code, located on or near the project site, therefore, the project will have no impact on corresponding zoning or conversion of such land.
- d) As there are no forest resources or zones for forest lands or timberland, the project will have no impact on forestland or timberland zoning or conversion of such land.
- e) The proposed project, a digester and biogas facility, does not conflict with any existing uses as the zoning and General Plan designations will remain the same. The expansion will not interfere with any agricultural activity on the parcel as the project site is not planted in crops. Furthermore, it has been previously determined that the uses are conditionally permitted uses in the AG-40 (General Agriculture, 40 acre minimum) zone with a conditionally approved Site Approval application. Therefore, the project would have no impact on farmland and forest land conversion.

4.2.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.2.4 Conclusion

Based on the impact discussion above, the proposed project would have no impact on agricultural or forest resources; therefore, no mitigation is required.



4.3 Air Quality

Air Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.1 Setting

The project site is located within the San Joaquin Valley Air Basin which lies within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD is the local agency established by the State to regulate air quality sources and minimize air pollution.

The proposed project is a digester and biomass facility (Renewable Natural Gas - RNG) intended to reduce the greenhouse gases produced by the existing dairy.

District Rules and Regulations aim to minimize a project's effect on air quality by ensuring compliance with regulatory standards. SJVAPCD Rules 2010 and 2201 address emissions from stationary sources, such as buildings or facilities, that release pollutants either directly or as fugitive emissions.

Existing dairy operations have four air quality permits:

- Permit N-8391-2-0 – Cow housing not to exceed 1800 mature cows,
- Permit N-8392-4-0 – Solid manure handling,
- Permit N-8391-5-0 – Feed storage and handling,
- Permit N-8391-6-0 – 225 BHP diesel emergency standby engine powering an electrical generator.

The project site is an existing dairy with lagoons that potentially produce odor from manure.



4.3.1.1 Emissions

Emission Estimation Methodology. Criteria pollutant and precursor emissions, and GHG emissions for the project construction activities and long-term operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.30. 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 emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The model calculates emissions of criteria pollutants, ozone precursors, and GHGs, including PM₁₀, PM_{2.5}, ROGs, NO_x, and CO_{2e}. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, C, and D (CAPCOA 2022). The input data and operation emission estimates for the proposed project are discussed below. The full compendium of the CALEEMOD results is found in Appendix B.

Construction. The project was referred to SJVAPCD by the Planning Division for review on September 10, 2025. The SJVAPCD issued a preliminary consultation response dated October 8, 2025. The construction emission estimates assume the following.

- Project is to construct two concrete pads at an existing dairy to construct two digester structures on an existing site.
- The digester consists of a structure enclosed on 4 sides with concrete with a membrane liner to contain the contents.
- Construction pad is existing and new construction is the pouring of the concrete digesters. No demolition, grading, or site preparation is required.
- Construction offroad equipment mix reflects the minimal construction required for the project.
- Assumed paving 700 feet by 24 feet onsite access road plus 1/2 acre of tube truck/worker parking.
- Electric use during construction was assumed at 10,000 kilowatts-hours/year.

Construction of the project assumes that 3 dairy waste pipelines, totaling 3000 linear feet, will be installed. Two of the pipelines (dairy feedstock and spent digester liquids) will be installed at a depth of 4 feet and the remaining pipeline (stormwater) at a depth of 1.5 feet. Total expected excavated material is approximately 330 cubic yards. Fill imports are estimated at 160 cubic yards to support pipeline installation.



The two identical digester containment structures, approximately 40 feet wide by 180 feet long (each) comprising 7,200 square feet each. The structures will be 12.5 feet in height with a concrete base in which will of a heavy mil rubber bladder. The containment structures will be created using off-the-shelf branded "Fox Blocks" that consist primarily of rebar and concrete with a R40 insulation factor. Combined with the internal bladder the concrete structures serve as a double liner. In addition, there will be a third external bladder to be used as emergency methane gas containment in lieu of a combustion flare.

The District suggests that the San Joaquin County consider including a recommendation in the project to use clean off-road construction equipment, such as the latest tier equipment where feasible, in order to further reduce air quality impacts from diesel exhaust emissions. Given the minimal construction emissions, the project proponent is not proposing to implement the use of clean off-road construction equipment with the latest tier equipment where feasible.

Table 4-1 presents the project’s construction air emissions are not expected to exceed the District's significance thresholds.

Table 4-1: Construction CalEEMod Emission Estimates

Pollutant	Maximum Controlled Annual Emissions (TPY)	SJVAPCD CEQA Thresholds (Tons/Year)	Exceeds SJVAPCD Threshold?
VOC	<0.1	10	No
NOx	0.3	10	No
CO	0.4	100	No
SOx	<0.1	27	No
PM10	<0.1	15	No
PM2.5	<0.1	15	No
CO2e (Metric Tons/Year)	67	--	N/A

Operations. The project will need to conform to the requirements of Order No. R5-2010-0130 Concerning Dairies with Manure Anaerobic Digester or Co-digester Facilities. The SJVAPCD found that project-specific pollutant emissions from both construction and operation are not anticipated to surpass any of the following District significance thresholds: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter 10 microns or less in size (PM10), or 15 tons per year of particulate matter 2.5 microns or less in size (PM2.5).

Based on typical dairy farm emissions, the Project would be expected to emit criteria/TAC contaminants in the form of Hydrogen Sulfide (H₂S), ammonia, and Nitrous Oxide (N₂O). Greenhouse gases (GHG) include Methane, Carbon Dioxide, and N₂O. Tables 4-2 and 4-3 present list of the criteria, TAC, and GHG sources/process, typical range, and environmental concerns.



Table 4-2: Criteria and Toxic Air Pollutants

Pollutant	Source Process	Typical Range	Environmental Concern
Ammonia (NH3)	Volatilization of ammonium in lagoon liquid and crust	2 to 10 kg/NH3 per year	Contributes to PM2.5 formation and odor
Hydrogen Sulfide	Sulfate reduction under anaerobic conditions	0.01 to 2 g/M2/yr	Odorous, toxic at high concentrations

Table 4-3: Greenhouse Gas

Gas	Typical Concentration Range	Primary Formation Mechanism	Notes
Methane (CH4)	100-300 g/M2	Produced by anaerobic methanogenic bacteria degrading volatile solids	Accounts for most GHG impact; varies with temperature, lagoon depth, and organic loading
Carbon Dioxide (CO2)	Minor (compared to CH4)	End product of aerobic and anaerobic decomposition	Usually not counted as it is biogenic
Nitrous Oxide	<0.05/kg/cow-yr	Nitrification and denitrification in lagoon edges or crusts	Low, but potent (298 times CO2)

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, the APCD has identified some common types of facilities that have been known to produce odors, which includes facilities like wastewater treatment operations, sanitary landfills, composting facilities, and transfer stations. By switching to a contained digester, the biological activity causing the smell will be managed and even reduced, so the project should not significantly increase odor emissions.

4.3.1.2 Operational Dairy Emissions

Based on the expected criteria and TAC emission from dairy operations, Table 4-4 provides an estimate of the current and future maximum daily and annual criteria and TAC emissions.



Table 4-4: Criteria/Toxic Air Pollutants (1,800 Cow Lagoon Manure)

Pollutant	Emission Factor (lbs/cow-yr)	Herd Size	Lbs/day Uncontrolled	Tons Per Year Uncontrolled	Lbs/day Controlled	Tons Per Year Controlled
Ammonia (NH3)	22	1800	108.7	19.8	108.7	19.8
Hydrogen Sulfide (H2S)	0.66	1800	3.26	0.6	3.26	0.6
VOC as ROG	0.55	1800	2.72	0.5	2.72	0.5

4.3.1.3 Operational CalEEMod Assumptions

The primary source of operational air emissions are roadway vehicle emissions, water and electrical use. The inputs for the CalEEMod model assumed up to 2 full-time equivalent employees onsite and approximately 3 trucks to remove produced gas from the project on a daily basis (7 days per week). Assuming vendor deliveries, a total of 10 vehicle trips per day were assumed for the CalEEMod analysis. Water use was estimated at zero as the project does not require water to operate and any liquid waste products are returned to the adjacent dairy. Potable and sanitary water use will be provided by the adjacent, existing dairy facility and is not expected to increase materially. Electrical use was estimated by a consultant as is assumed at 702,397 kilowatt-hours per year (see Appendix C- Electric Load Analysis Part 3 260318). Table 4-5 presents the CalEEMod maximum daily and annual emissions.

Table 4-5: Operational CalEEMod Emission Estimates

Pollutant	Maximum Controlled Annual Emissions (TPY)	SJVAPCD CEQA Thresholds (Tons/Year)	Exceeds SJVAMQD Threshold?
VOC	0.08	10	No
Nox	0.004	10	No
CO	0.06	100	No
SOx	<0.1	27	No
PM10	<0.1	15	No
PM2.5	<0.1	15	No
CO2e (Metric Tons/Year)	164.4	--	N/A

Total project air emissions are presented in Table 4-6 which include emissions from Tables 4-4 and 4-5 above.



Table 4-6: Total Controlled Operational Emission Estimates

Pollutant	Maximum Controlled Annual Emissions (TPY)	SJVAPCD CEQA Thresholds (Tons/Year)	Exceeds SJVAMQD Threshold?
VOC	0.58	10	No
NOx	0.005	10	No
CO	0.06	100	No
SOx	0.005	27	No
PM10	0.005	15	No
PM2.5	0.005	15	No
CO2e	49.5	--	N/A
H2S	0.6	--	N/A
Ammonia	19.8	--	N/A

4.3.2 Impacts

Does the project:

a) Conflict with or obstruct implementation of the applicable air quality plan - The project would generate relatively small quantities of criteria pollutants compared to SJVAPCD significance thresholds. As shown in Table 4-6, emissions of VOC, NOx, PM10, and PM2.5 are well below the District thresholds used to evaluate regional air quality impacts. Because the project would comply with SJVAPCD permitting requirements and would not exceed established emission thresholds, it would not conflict with or obstruct implementation of the regional air quality management plan. This renders the project having a less than significant impact.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment - The San Joaquin Valley Air Basin is designated non-attainment for ozone and particulate matter. However, SJVAPCD thresholds are designed to ensure that projects emitting pollutants below these levels would not make a cumulatively considerable contribution to regional air pollution.

Total project emissions are substantially below these thresholds, as shown in Table 4-5. Consequently, the project would not result in a cumulatively considerable net increase in criteria pollutants rendering the project as having a less than significant impact.

c) Expose sensitive receptors to substantial pollutant concentrations - Air emissions associated with the project primarily consist of ammonia, hydrogen sulfide, and volatile organic compounds generated during manure management. These emissions are typical of dairy operations and are not expected to exceed regulatory thresholds.



In addition, the project proposes a contained anaerobic digester system that manages biological decomposition processes in a controlled environment. This approach reduces uncontrolled emissions that would otherwise occur from open lagoon conditions.

Vehicle emissions associated with the project are minimal and limited to approximately ten daily vehicle trips. Because emissions are low and below regulatory thresholds, the project would not expose sensitive receptors to substantial pollutant concentrations.

Impacts are to be considered less than significant.

- d) Result in other emissions (such as odors) adversely affecting a substantial number of people - Odor emissions from dairy operations typically result from anaerobic decomposition of manure that generates compounds such as ammonia and hydrogen sulfide. However, the proposed project incorporates a contained anaerobic digester that manages and controls the biological processes responsible for odor formation.

Because the digestion process would be enclosed and controlled, odor emissions are expected to be reduced relative to existing lagoon conditions. Accordingly, the project would not generate odors affecting a substantial number of people. Therefore, no significant impact will occur.

4.3.3 Mitigation

Construction. Mitigation proposed by Orland is not necessary.

Fugitive dust control plans are required by the SJVAPCD (Rule 8021) for certain construction projects. However, the Orland project does not meet the non-residential project size to require a Fugitive Dust Plan.

Operations. Mitigation proposed by Orland is not necessary.

Operational mitigation includes complying with applicable state/federal mobile source, refrigerant, water procurement, and architectural coating regulations.

By switching to a contained, in-vessel digester, the biological activity causing the smell will be managed and even reduced, so the project should not significantly increase odor emissions.

4.3.4 Conclusion

Based on the impact discussion above, potential impacts to air quality resources associated with the proposed project would be less than significant: therefore, no further mitigation is required.



4.4 Biological Resources

Biological Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



4.4.1 Setting

The project site is a gravel-soil packed parking lot for agricultural equipment. Consultations with the California Department of Fish and Wildlife Natural Diversity Database lists *Anthicus sacramento* (Sacramento anthicid beetle), *Buteo Swainsoni* (Swainson's hawk), Great Valley Cottonwood, *Sylviagus bachmani riparius* (riparian brush rabbit), *Eryngium racemosum* (Delta button-celery), *Coccyzus americanus occidentalis* (western yellow-billed cuckoo), *Neotoma fuscipes riparia* (San Joaquin Valley woodrat) and *cirsium crassicaule* (slough thistle) as rare, endangered, or threatened species habitat located near the site for the proposed project.

Referrals have been sent to the San Joaquin Council of Governments (SJCOG), the agency responsible for verifying the correct implementation of the *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan* (SJMSCP), which provides compensation for the conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan.

A referral was sent to SJCOG and SJCOG responded in letter dated September 11, 2025, that the project is subject to the SJMSCP. The applicant has verbally confirmed that the project will participate in SJMSCP if accepted. The SJCOG is submitting a staff report to the Habitat Technical Advisory Committee for their consideration on November 12, 2025. If accepted it will move to the SJCOG Board of Directors for acceptance into the Plan in early December. With the applicant's participation, the proposed project should be considered consistent with the SJMSCP and any impacts to biological resources resulting from the proposed project will be reduced to a level of less-than-significant.

No jurisdictional surface water resources, wetlands, sensitive habitats, or designated critical habitat are located within or adjacent to the project site. The nearest surface water resource is the Stanislaus River, located approximately 2 miles south of the project site.

4.4.2 Impact

- a) Since the project site has been used as a parking lot for agricultural equipment, the project will 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 U.S. Fish and Wildlife Service.
- b) The project site and its vicinity are entirely composed of ongoing dairy and feed crop activities. There is no riparian habitat located on the project site. The nearest riparian habitat, the Stanislaus River Riparian corridor, is located approximately 2 miles south of the project site. Therefore, the project will not 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) There are no jurisdictional wetlands located on the project site; the nearest jurisdictional water resource is located approximately 2 miles south of the project site. Therefore, there would be no impact and the project will not have a substantial adverse effect on state or federally protected wetlands.
- d) The project will not include the removal of any trees or blockage or impingement of riparian habitat. Consequently, the implementation of 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, no impact would occur as a result of the proposed project.

In addition, the project's impact on resident or migratory wildlife corridors will be reduced to less than significant because the project applicant will participate in the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Implementation of the SJMSCP is expected to reduce impacts to biological resources resulting from the proposed project to a level of less-than-significant.

- e) The project's conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance are expected to be less than significant because the project applicant will participate in the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Implementation of the SJMSCP is expected to reduce impacts to biological resources resulting from the proposed project to a level of less-than-significant.
- f) The project's impact on the provisions of an adopted Habitat Conservation Plan, natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, are expected to be less than significant because the project applicant will participate in the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Implementation of the SJMSCP is expected to reduce impacts to biological resources resulting from the proposed project to a level of less-than-significant.

4.4.3 Mitigation

The applicant has agreed to participate in the County's *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan*. Pursuant to the Final EIR/EIS for SJMSCP, dated November 15, 2000, and certified by SJCOG on December 7, 2000, implementation of the SJMSCP is expected to reduce impacts to biological resources resulting from the proposed project to a level of less-than-significant. As part of this approved participation SJCOG will conduct a pre-construction biology survey for the digester project.



4.4.4 Conclusion

Based on the impact discussion above, potential impacts to biological resources associated with the proposed project would be less than significant: therefore, no further mitigation is required.

4.5 Cultural Resources

Cultural Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.5.1 Setting

The proposed project is a digester and biogas facility at an existing dairy. All development is proposed within the existing disturbed areas on site, which have been utilized as a dairy since before 1965. It was purchased in 1972 by Frank Borges.

The Central California Information Center replied to a TSS Consultant record search request for any information of a historical or cultural value at the project site. (Appendix C – Central California Information Center Response to an Extended Records Search - Orland Power Solutions, 9/23/2025). No historic resources have been identified on the project site. Historic resources (buildings more than 45 years old) are in the immediate vicinity. There are two buildings that are 72 years old (or older).

The project site is not associated with any significant event or trend in American history, nor has it been directly associated with persons significant in our past. Lastly, the project site is not expected to yield important information about prehistory or history.

In the event archeological resources are unearthed or discovered during any construction activities, California state law requires that there shall be no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county has determined manner and cause of death, and the recommendations concerning the treatment and disposition of



the human remains have been made to the person responsible for the excavation (California Health and Safety Code - Section 7050.5). At the time of development, if human burials are found to be of Native American origin, the developer shall follow the procedures pursuant to Title 14, Division 6, Chapter 3, Article 5, Section 15064.5(e), of the California State Code of Regulations.

4.5.2 Impact

- a) All development is proposed within existing disturbed areas on site, which have been utilized as a dairy since before 1965. Structures on the property have been in use since then, with some built since purchase. The project will not affect any of the structures older than 45 years. The project site is not associated with any significant event or trend in American history, nor has it been directly associated with persons significant in our past. The project site is not expected to yield important information about prehistory or history; therefore, Implementation of the proposed project would not result in impacts to a historical resource, if present. Therefore, no impact would occur.
- b) Construction would require minor ground disturbance for the placement of the new concrete pad and digester structures. The project will require 3 sets of underground piping: (1) Manure pit to heater will carry fresh manure to heater via a 6-inch pipe. The trench will be 12 inches wide 4 foot deep and 310 feet long; (2) Digester to pond - this will carry spent digestate to the 3 ponds using an 8-inch diameter pipe buried in a trench 3 to 4 foot deep and 14 inches wide and 70 feet long; (3) Storm drain piping - This will go from inside and around the digesters and carry the storm water about 125 feet to the farming field adjacent to the pad. This will be 6-inch pipe encased in drain rock buried 18 inches deep.

No known archaeological resources have been identified on the project site or in the immediate vicinity. Therefore, archaeological resources are not expected to be present with the proposed area of disturbance associated with the proposed project.

- c) The project will not disturb any human remains, including those interred outside of formal cemeteries. If remains are found, the process described in 4.5.1 will be implemented.

4.5.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.5.4 Conclusion

No impacts on historical resources would occur and the potential for impacts on archaeological and paleontological resources is considered less than significant.



4.6 Energy

Energy	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

4.6.1 Setting

The proposed project involves a manure-only digester and biogas facility at an existing dairy, and on an existing engineered pad.. The facility will process manure, and capture gas emissions. The final product of the digester project is Renewable Natural Gas (RNG), which will be transported offsite for use in other applications. This project is intended to produce clean biomethane gas which will assist in the pursuit of achieving the State’s renewable energy goals.

4.6.2 Impact

a - b) The California Energy Code (California Code of Regulations, Title 24, Part 6 – Building Energy Efficiency Standards for Residential and Nonresidential Buildings)was established by the California Building Standards Commission pursuant to a legislative directive to reduce energy consumption statewide. The purpose of the code is to support state energy policy, promote development of renewable energy resources, and ensure preparedness for energy emergencies. These standards are periodically updated by the California Energy Commission. The code sets forth energy conservation requirements applicable to most buildings across California. These provisions will apply to the proposed project and will be triggered during the building permit application process, thereby ensuring that environmental impacts associated with wasteful, inefficient, or unnecessary energy use remain less than significant and that no conflicts arise with state or local energy efficiency or renewable energy plans.

4.6.3 Mitigation

Mitigation proposed by Orland is not necessary.



4.6.4 Conclusion

Based on the impact discussion above, impacts to energy resources would be positive.

4.7 Geology and Soils

Geology and Soils	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Geology and Soils	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.7.1 Setting

- a) According to the California Department of Conservation's Geological Survey for its Earthquake Hazards Zone Application online map (EQ Zapp)¹, the project site is not within an earthquake fault zone. However, like other areas in seismically active Northern California, it may experience strong ground shaking during an earthquake, but no more than the surrounding region. The project will be designed and constructed in compliance with the California Building Code and San Joaquin County Ordinance Section (8-1000) standards for seismic safety. The Central Valley Regional Water Quality Control Board (CVRWQCB) requires the preparation of a seismic study.
- b) The project applicant must file a Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board (CVRWQCB) and comply with the General Permit for Storm Water Discharges from Construction Activities. This includes developing a Storm Water Pollution Prevention Plan (SWPPP) and using best management practices to prevent erosion and reduce sediment and pollutants at the construction site.
- c) A soils report is required for grading and foundations, with its recommendations incorporated into construction plans as mandated by the California Building Code (CBC). A geotechnical study was undertaken for the project site in the Fall 2024 (see Appendix D for the full report). The purpose of the report was to obtain information regarding the subsurface conditions of a prepared building pad intended for the construction of a confining structure for the digester bladder for methane gas generation. The CVRWQCB requires an Operations, Maintenance and Monitoring (OMM) Plan for the bladders. General soil and foundation engineering design and recommendations were provided based on the physical characteristics of the subsurface materials and the geotechnical limitations created by the site's surface features. The geotechnical report is included in Appendix D.
- d) The Soil Survey of San Joaquin County classifies the project site soil as expansive, meaning it is prone to shrink and swell.
- e) The project site has 3 ponds to handle the manure and effluent from the dairy cow pens which under the proposed project would feedstock the AD system for conversion to biogas, with the

¹ <https://www.conservation.ca.gov/cgs/geohazards/eq-zapp>



digestate being discharged to the ponds. Also, the project would require the use of existing and permitted septic systems for domestic wastewater disposal.

- f) No known paleontological resources have been identified on the project site or in the immediate vicinity. The project will have no or only minor impact on the surface or subsurface geology.

4.7.2 Impact

- a) The project applicant should complete a Seismic Analysis for the design earthquake that will need to be included in the Design Report submitted to the CVRWQCB. A soils report is also required, and all recommendations will be incorporated into the construction plans, including an Operations, Maintenance and Monitoring (OMM) Plan for the digester containment structures. Therefore, the risk of leakage from seismic ground shaking or potential liquefaction is expected to be less than significant.

The project site is topographically flat with no slopes, so landslide risks are not present.

- b) The Construction General Permit (CGP) requires the development of a Storm Water Pollution Prevention Plan (SWPPP), which mandates the implementation of both temporary and post-construction best management practices. These measures are designed to prevent erosion and minimize sediment and pollutant discharge from the construction site. As a result, impacts related to soil erosion are anticipated to be less than significant.
- c) Following these CBC guidelines will reduce risks from lateral spreading, subsidence, or liquefaction and help maintain structural integrity during seismic events. Thus, unstable geologic unit impacts are expected to be less than significant.
- d) Engineering specifications required by the CBC for expansive soil will minimize damage risk and ensure project buildings are not significantly affected.
- e) The site can accommodate cow pen effluent, with digestate returned to the ponds after methane is extracted from manure. The number of milk cows will remain unchanged, so the project will have no additional impact.
- f) No known paleontological resources have been identified on the project site or in the immediate vicinity. Therefore, paleontological resources are not expected to be present with the proposed area of disturbance associated with the proposed project.

4.7.3 Mitigation

Additional mitigation proposed by Orland is not necessary.



4.7.4 Conclusion

Based on the impact discussion above, potential impacts associated with the project would be less than significant.

4.8 Greenhouse Gas Emissions

Greenhouse Gas Emissions	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.8.1 Setting

Global Warming is a public health and environmental concern around the world. As global concentrations of atmospheric greenhouse gases increase, global temperatures increase, weather extremes increase, and air pollution concentrations increase. The predominant opinion within the scientific community is that global warming is currently occurring, and that it is being caused and/or accelerated by human activities, primarily the generation of “greenhouse gases” (GHG). Neither the SJVAPCD nor San Joaquin County sets project-level thresholds for construction-related greenhouse gas (GHG) emissions. Construction GHG emissions are released once, and as a result, are not generally considered to have a substantial impact on global climate change. Therefore, this analysis focuses on long-term operational GHG emissions.

However, the SJVAPCD has adopted the Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the District Policy Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

The proposed project will comply with SJVAPCD regulations, including guidance and policies that



require performance-based standards (Best Performance Standards, BPS) for assessing greenhouse gas (GHG) impacts during environmental review under CEQA. Projects must demonstrate a 29% reduction in GHG emissions compared to Business As Usual (BAU), defined as emissions from 2002–2004.

4.8.2 Impact

- a) Under CEQA, an individual project’s greenhouse gas emissions will generally not result in direct significant impacts. This is because the climate change issue is global in nature. However, an individual project could be found to contribute to a potentially significant cumulative impact. Projects that have greenhouse gas emissions above the noted thresholds may be considered cumulatively considerable and require mitigation.
- b) Based a study of dairy farm emissions, the Project would be expected to emit Greenhouse gases (GHG) including Methane, Carbon Dioxide, and N₂O. Tables R presents of list of GHG sources/process, typical range, and environmental concerns.

Table 4-6: Greenhouse Gas

Gas	Typical Concentration Range	Primary Formation Mechanism	Notes
Methane (CH ₄)	100-300 g/M ²	Produced by anaerobic methanogenic bacteria degrading volatile solids	Accounts for most GHG impact; varies with temperature, lagoon depth, and organic loading
Carbon Dioxide (CO ₂)	Minor (compared to CH ₄)	End product of aerobic and anaerobic decomposition	Usually not counted as it is biogenic
Nitrous Oxide	<0.05/kg/cow-yr	Nitrification and denitrification in lagoon edges or crusts	Low, but potent (298 times CO ₂)

Neither the SJVAPCD nor the County provide project-level thresholds for construction related GHG emissions. Construction GHG emissions are a one-time release over a 6-month construction period and are, therefore, not typically expected to generate a significant contribution to global climate change. As such, the analysis herein is limited to discussion of long-term operational GHG emissions.

The project operational mobile source greenhouse gas (GHG) emissions will be the result of the minor impact of 1.5 employee round trips per day and of 12 truck round trips for gas collection. This would total about 3.5 trips per day. As noted previously, the proposed project will be subject to the rules and regulations of the SJVAPCD.



To be determined to have a less-than-significant individual and cumulative impact with regard to GHG emissions, projects must include BPS sufficient to reduce GHG emissions by 29 percent when compared to Business As Usual (BAU) GHG emissions. Per the SJVAPCD, BAU is defined as projected emissions for the 2002- 2004 baseline period. Projects which do not achieve a 29 percent reduction from BAU levels with BPS alone are required to quantify additional project-specific reductions demonstrating a combined reduction of 29 percent. It has been calculated that the proposed project will surpass this required reduction from BAU levels by the production of renewable natural gas, per the following:

- Assuming natural gas has 1,037 Btu per cubic foot;
- Assuming 200 MCF (200,000 ft³) of fossil-based natural gas offset daily by the production of 200 MCF of renewable natural gas;
- 200,000 ft³ times 1,037 Btu/ft³ equals 207,400,000 Btu/year;
- With 1 kW per hour equaling 3,412, 207,400,000 Btus equals 60,783 kWh per day;

With the annual projected use of electricity of approximately 702,397 kWh per year, and with the project only needing 60,783 kWh per day of renewable natural gas, the "offset" of fossil based natural gas can be reached within the first 12 days on annual operations of the digester. This is also equal to a reduction in BAU GHG emissions of approximately 97%.

4.8.3 Mitigation

Mitigation will be a result of SJVAPCD project review and recommendations. Additional mitigation proposed by Orland is not necessary.

4.8.4 Conclusion

Based on the impact discussion above, potential impacts associated with greenhouse gases would be less than significant.

4.9 Hazards and Hazardous Materials

Hazards and Hazardous Materials	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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Would the project:



Hazards and Hazardous Materials	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.9.1 Setting

a) Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. Hazardous materials and waste can result in public health hazards if improperly handled, released into the soil or groundwater, or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The site is not



located within 1,000 feet of a school. The dairy does not use any materials classified as Acutely Hazardous Material.

- b) The proposed project is a digester and biogas facility at an existing dairy. Pursuant to the Hazardous Materials Disclosure Survey submitted with the application, the facility will handle or store hazardous materials on site. To store or handle hazardous materials onsite, the owner/operator must report the use or storage of these hazardous materials to the California Environmental Reporting System (CERS) and must comply with all applicable federal, state, and local regulations pertaining to the storage of hazardous materials. In this way, impacts related to the use, transport, or disposal of hazardous materials are expected to be less than significant.
- c) The proposed facility is not located within 1/4-mile of an existing or proposed school.
- d) The California Department of Toxic Substance Control's (DTSC) uses databases such as EnviroStor GeoTracker to map the location of hazardous waste sites including sites that have been remediated, sites currently undergoing remediation, and sites that require cleanup. Also, the State Water Resources Control Board's (SWRCB) has its GeoTracker system (California Environmental Protection Agency [Cal/EPA] 2015). There are no sites on either database with 1 mile of the project site.
- e) The nearest public airport is the Stockton Metropolitan Airport south of Stockton. It is located 14 miles north of the project site. The project site is not within an airport land use plan.
- f) According to the County's emergency evacuation map for the areas near project site, the project is not near any emergency evacuation route for any of the nearby communities.
- g) California Department of Forestry and Fire Protection has rated this property as a Local Responsibility Area (LRA), meaning the financial responsibility of preventing and suppressing wildfires is primarily the responsibility of a Local agency; in this case the Lathrop-Manteca Fire Protection District. Also, this parcel is located in an area that the State Fire Marshal has identified as not being in a Fire Hazard Severity Zone per Government Code section 51178. (CAL FIRE, 9/24/2025)

4.9.2 Impact

- a) This project does not involve the transportation or receipt of hazardous materials. The proposed project would not directly introduce new forms of hazardous materials during operation of the facility.
- b) The receipt and handling of hazardous materials at this facility is prohibited by law. Compliance with the existing applicable state regulations is expected to reduce potential impacts associated with reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, impacts would be less than significant.



- c) Implementation of the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Therefore, no impact would occur.
- d) The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC Hazardous Waste and Substances Site List – Site Cleanup [Cortese List] Cal/EPA; accessed September 16, 2025). In addition, there are no such sites within one mile of the project site. Therefore, no impact would occur because of the proposed project.
- e) Because of the distance from the public airport, there would not be any safety hazard for people working at the project site.
- f) The proposed project would comply with the Municipal Code and Fire Department standards for emergency vehicle access and would not conflict with the approved LHMP. There would be no impact in connection with the proposed project.
- g) Though the project will not be endangered by wildfire, it would comply with the applicable fire safety provisions of the California Building Code as well as standard conditions of approval, thereby reducing the risk of damage from fire to the maximum extent practicable.

4.9.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.9.4 Conclusion

Based on the impact discussion above, potential impacts associated with hazards and hazardous materials and fire would be less than significant. Therefore, no mitigation is required.

4.10 Hydrology and Water Quality

Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|



Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 a substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.10.1 Setting

- a) The proposed project site lies within the drainage area for the Stanislaus River. The dairy currently operates three permitted manure ponds and manure pit which does some solids separation from the waste stream. There is no existing mechanism in place to capture the methane gas from these facilities.



Figure 4-4: Eastern Manure Pond



Figure 4-5: Western Manure Pond





Figure 4-6: Manure Pit



Construction of the dairy digester processing area will result in ground disturbance equal to or greater than one acre in size and would then be within the jurisdiction of the Central Valley Regional Water Quality Control Board (CVRWQCB). Groundwater will supply the water necessary for the offices, restrooms, eye-washing stations, and drinking fountains and is then transferred to the on-site septic sewer system. It is also used for dust control, landscaping, and washing down equipment. Any water runoff will be diverted to the manure retention pond. Implementation of the proposed project would not interfere with ground water recharge or significantly deplete groundwater supplies.

The dairy currently operates according to Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order No. R5-2007-0035. This includes a monitoring and reporting program and record-keeping and reporting requirements.

- b) The Eastern San Joaquin Groundwater Subbasin (Subbasin) is one of 21 basins and subbasins identified by the California Department of Water Resources (DWR) as being in a state of critical overdraft. The Sustainable Groundwater Management Act (SGMA) requires preparation of a Groundwater Sustainability Plan (GSP) to address measures necessary to attain sustainable conditions in the Subbasin.

While the total volume of groundwater in storage in the Subbasin has declined over time, groundwater storage reduction has not historically been an area of concern in the Subbasin, as there are large volumes of fresh water stored in the aquifer. The total fresh groundwater in storage was estimated at over 50 million-acre-feet (MAF) in 2015. The amount of groundwater in storage has decreased by approximately .01 percent per year between 1995 and 2015.



- c) Groundwater is used as the source of water for dairy facility operations, drinking, and fire suppression the dairy and onsite residences. The dairy uses 204-250 gallons per day of water for the flush cleaning system and domestic water use. The dairy has 3 wells at depths of 200 and 400 (2) feet.
- (i) The current on-site drainage pattern is designed to flow into the manure ponds without creating additional opportunities for soil erosion either onsite or offsite.
 - (ii) The project site is relatively flat. The current on-site drainage pattern is designed to flow into the manure ponds. No on-site flooding currently occurs. The project site is in the designated Flood Zone X, which is an area determined to be outside the 0.2% annual chance floodplain by the Federal Emergency Management Agency (FEMA Map Number 06077C0780F). Runoff will be contained onsite in manure ponds or absorption by the adjacent fields. The proposed project would result in an increase of 2.9 acres in relatively impervious surfaces at the project site and would modify the existing drainage patterns. However, the new project facilities would be designed to control fluids and prevent runoff. Additionally, compliance with the existing Industrial Activities SWPPP minimize potential impacts associated with the creation or contribution of runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the proposed project is not expected to 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.
 - (iii) Groundwater has been protected through the existing use of a waste collection system for the cows and its disposal into lined manure ponds. The existing ponds were constructed pursuant to Order R5-2013-0122 Pond Specifications. Compliance with the existing Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order No. R5-2007-0035 minimized potential impacts to substantially degrade water quality for the area.
 - (iv) Runoff water is designed to flow into the manure ponds or into the crop fields. There are no historic flood flow areas on the dairy or adjacent field. Water resources, such as rivers, streams, lakes, reservoirs, impoundments, bays, inlets, estuaries, wetlands, drainage sloughs, vernal pools, swales, or Clean Water Act (CWA) Section 303d impaired water bodies within the project site.
- d) The existing dairy and project site are not in an area of flooding. The nearest surface water resource is the Stanislaus River, about 3 miles south of the project site. The project site is not located in a coastal zone where there would be risk of tsunami, nor is it located near a large body of water where there would be risk of seiche. The landslide/mudflow risk is considered very low.



- e) The project is consistent with existing water quality control plans ((Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order No. R5-2007-0035), with the approval of a Construction General Permit Order 2009-009-DWQ from the RWQCB, and the Eastern San Joaquin County Groundwater Subbasin Plan as no additional water supplies are required.

4.10.2 Impact

Construction activities would temporarily modify the existing drainage patterns on-site.

- a) The project will not be creating additional effluent that would affect water quality or waste discharge requirements. It would not alter the existing dairy operations, which operate according to CVRWQCB Order R5-2013-0122, Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies.
- b) The project would not require additional water supplies. Construction would result in an increase in impervious surfaces of approximately 2.9 acres compared to existing conditions. As part of the construction process, the project will meet requirements to submit plans for the disposition of surface runoff and erosion control to the San Joaquin County Public Works Department.

Since the project will disturb one (1) or more acres of soil it will be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-009-DWQ from the RWQCB. The General Permit process requirements would be followed, and the mitigation would be incorporated into the project's construction activities regarding stormwater runoff. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD).

- c) There would be a modification of the existing drainage pattern on-site; therefore, construction activities could potentially interfere in only a minor, temporary way with groundwater recharge.
 - (i) The project will not result in substantial erosion and there is no place for siltation to occur.
 - (ii) Implementation of the proposed project would create new impervious surfaces and would modify existing drainage patterns on-site. Compliance with County's ordinances and SWRCB regulations is expected to minimize potential impacts associated with erosion, runoff, and modification of drainage patterns associated with the proposed project and to ensure compliance with state minimum standards. Therefore, the proposed project would have a less than significant impact on existing drainage patterns, which would not result in substantial erosion or siltation on- or off-site.
 - (iii) Implementation of the proposed project would create a small increase in runoff, and impervious surfaces at the project site. There will be a minor change in drainage patterns. However, additional storm water intakes will satisfactorily accommodate additional



runoff from the new impervious areas. Therefore, the proposed project would have minimal impact on existing site drainage, which could result in flooding on- or off-site.

- (iv) Flood flows do not use the dairy or fields of the project site. Consequently, while the proposed project does propose structures, within the 100-year flood hazard area as mapped on a FEMA designated Flood Hazard Boundary or Flood Insurance Rate Map (FEMA 2012), a less than significant impact would occur.
- d) Implementation of the proposed project would not expose people or structures to the risk of inundation by seiche, tsunami, or mudflow. Therefore, no impact would occur because of the proposed project.
- e) Implementation of the proposed project would be consistent with existing water quality control plans and the Eastern San Joaquin County Groundwater Subbasin Plan as no additional water supplies are required. Therefore, the project will have a less than significant impact.

4.10.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.10.4 Conclusion

Based on the impact discussion above, potential impacts associated with hydrology and water quality would be less than significant.

4.11 Land Use and Planning

Land Use and Planning	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



4.11.1 Setting

The San Joaquin County General Plan designates the project site as A/G – General Agriculture. The designation is meant to provide for large-scale agricultural production and associated processing, sales, and support uses. The AG-40 zone is intended to preserve agricultural lands for the continuation of commercial agricultural enterprises.

According to Development Title Section 9-605.2, the use types assigned to this project, *Agricultural Waste* and *Utility Service - Major*, would be permitted within the AG-40 zone with a conditionally approved Site Approval application.

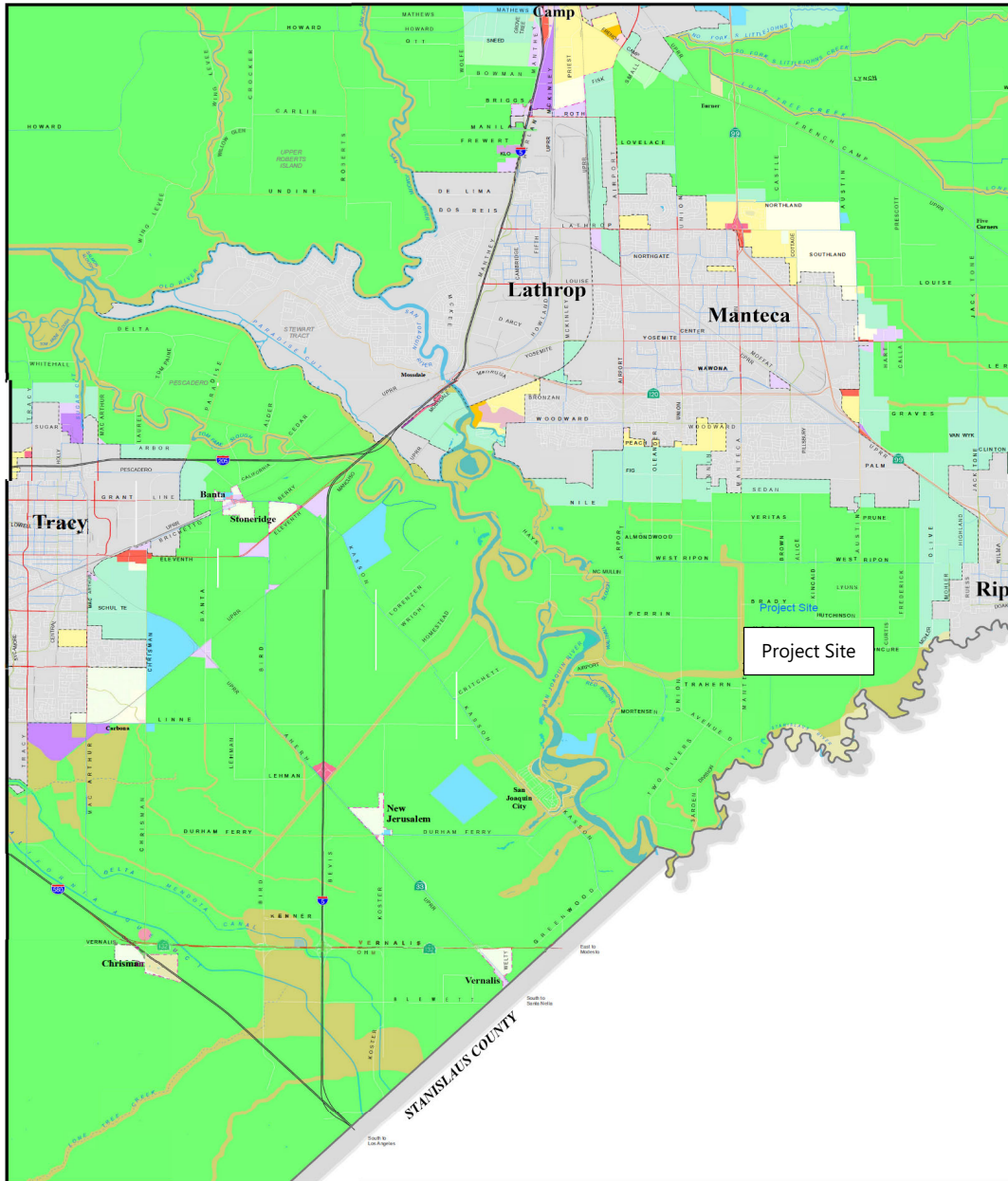
Physically the proposed project would be located in an unincorporated area about 4 miles west of Ripon and 2.5 miles south of the Manteca city limits. It is not located in an unincorporated community. It is adjacent to E. Brady Road, about a half mile east of the intersection with Manteca Road. The street address for the dairy is 8350 E. Brady Road.

The dairy site is located in Section 2, Township 17 North, Range 7 East and can be found on the French Corral 7.5-minute USGS Quad map. It includes Assessor Parcels: APN 048-210-005 (30.0 acres) and APN 48-210-006 (35.0 acres), and APN 048-210-007 (5.0 acres); The assessor parcel maps are found in Appendix E.

Surrounding uses are completely devoted to agricultural operations such as dairies, row crops, and orchards. There are no buildings or roads on or near the project site. Figure 4-8 displays the project area's land use designations.



Figure 4-7: Project Area Land Use Designations



<p>AGRICULTURAL</p> <ul style="list-style-type: none"> A/L Limited Agriculture A/G General Agriculture A/UR Urban Reserve Agriculture A/I Industrial Agriculture <p>RESIDENTIAL</p> <ul style="list-style-type: none"> R/R Rural Residential R/ML Very Low Density Residential R/L Low Density Residential R/LM Residential Low & Medium Density R/M Medium Density Residential R/MH Medium High Residential R/H High Density Residential 	<p>COMMERCIAL</p> <ul style="list-style-type: none"> C/N Neighborhood Commercial C/C Community Commercial C/G General Commercial C/O Office Commercial C/R Commercial Recreation C/RS Rural Service Commercial C/FS Freeway Service Commercial <p>INDUSTRIAL</p> <ul style="list-style-type: none"> I/L Limited Industrial I/T Truck Terminals I/G General Industrial I/W Warehouse Industrial 	<p>OPEN SPACE</p> <ul style="list-style-type: none"> OS/PR Open Space Parks Recreation OS/RC Open Space Resource Conservation <p>MULTIPLE USE</p> <ul style="list-style-type: none"> AP/X Airport/Multi-Use M/X Mixed/Use <p>PUBLIC</p> <ul style="list-style-type: none"> P/F Public Facilities or Services 	<p>BOUNDARIES</p> <ul style="list-style-type: none"> Incorporated Areas Community Boundary <p>CIRCULATION</p> <ul style="list-style-type: none"> Interstate Freeway Principal Arterial Major Collector Minor Arterial Minor Collector Rail Road
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San Joaquin County, CA
LATHROP-MANTECA
 GENERAL PLAN AMENDMENTS

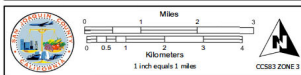
APP NO. BOARD ORDER RESOLUTION ADOPTION DATE

PA 120006	R 25-22	02/07/2012
PA 120010	R 25-23	02/07/2012
PA 120016	R 25-24	02/07/2012
PA 120020	R 25-25	02/07/2012
PA 120021	R 25-26	02/07/2012
PA 120023	R 25-27	02/07/2012
PA 120027	R 25-28	02/07/2012
PA 120037	R 25-29	02/07/2012
PA 120041	R 25-30	02/07/2012

San Joaquin County
 Geographic Information System
 441 N. San Joaquin Street, Suite 200, Stockton, CA 95202

The information on this map is for general information purposes only. The County of San Joaquin does not warrant its accuracy, completeness or suitability for any particular purpose. The information should not be relied upon without further verification.

Printed Date: 9/17/2015 Created: 6/26/14



GENERAL PLAN



4.11.2 Impact

- a) Implementation of the proposed project would not physically divide an established community. The proposed site and nearby land uses are for agricultural uses. Therefore, no impact would occur because of the proposed project.
- a) The project will not conflict with any applicable land use plan, policy, or regulation of San Joaquin County, which has jurisdiction over the project. This includes, but is not limited to the general plan, specific plan, or zoning ordinance adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impact associated with a land use conflict would occur because of the proposed project.

4.11.3 Mitigation

Mitigation proposed by Oland is not necessary.

4.11.4 Conclusion

Based on the impact discussion above, no impact associated with land use would occur because of the proposed project; therefore, no additional mitigation is required.

4.12 Mineral Resources

Mineral Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



4.12.1 Setting

The project site historically has been used for agricultural purposes. There are no indications of any attempts at mineral extraction at the site and there are no known mineral resources within the project site or immediate vicinity (USGS 2015).

4.12.2 Impact

- a) There are no known mineral resources within the project site or immediate vicinity; therefore, implementation of the proposed project would not result in the loss of availability of a known mineral resource and no impact on mineral resources would occur because of the proposed project.
- b) There are no mineral resources identified within the project site or immediate vicinity and the proposed project would not result in the loss of availability of a locally important mineral resource recovery site. Therefore, no impact on a locally important mineral resource recovery site would occur because of the proposed project.

4.12.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.12.4 Conclusion

Based on the impact discussion above, no impact associated with mineral resources would occur because of the proposed project. Therefore, no mitigation is required.

4.13 Noise

Noise	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



- c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.13.1 Setting

Noise sensitive land uses include schools, hospitals, nursing homes, churches, libraries, and residences. The only sensitive land uses are three residences located within the immediate vicinity of the project. Two of them are on the property owned by Frank Borges, which accommodates employees of the dairy and are approximately 600 and 1,000 feet respectively. There is one other home located northeast on East Brady Road, approximately 1,000 feet from the project site. The existing ambient noise environment is characterized by dairy and vehicle operations.

4.13.2 Impact

- a) The nearest sensitive receptor to the project site would be the employee-residents living on the Borges Dairy Farm, which is approximately 600 feet north of the dairy digester system. The nearest offsite, non- Borges Dairy Farm employee to the project site is located approximately 1000 feet west of the project site on Brady Road. Implementation of the proposed project would generate new sources of noise during construction and operation activities. Noise associated with construction activities would be temporary, lasting 3 to 4 weeks.

Typical noise levels produced by construction equipment that may be used during construction activities associated with the proposed project are summarized in Table 4-4, Typical Construction Equipment Noise Levels, below. Typical construction equipment is expected to generate noise levels ranging from 70 to 90 decibels (dB) at 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance over hard sites (e.g., pavement) and 7.5 dB per doubling of distance over soft sites (e.g., grass). As the project is to be constructed on an existing engineered pad, heavy equipment use will be less with less noise accordingly.

Table 4-7: Typical Construction Equipment Noise Levels

Noise Source	Noise Level (dBA) at 50 Feet
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85



Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Construction activities may exceed the County’s maximum standard daytime noise level of 70 dB on the project site; however, construction noise would be intermittent and short term in duration and would not require major demolition, excavation, or grading activities that could generate substantial noise and vibration. Construction activities would be conducted between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday, or Saturday from 8:00 a.m. to 5:00 p.m.

The noise generated from hauling vehicle trips associated with the proposed project is not expected to exceed existing levels as heavy duty vehicles, such as raw milk tanker trucks, already utilize E. Brady Road. Therefore, construction and operation of the proposed project is not expected to generate noise levels more than standards established in the local general plan or noise ordinance.

It is noted that noise standards are exempted in Agricultural zoned propertyies. Section 9-404.020(f) effectively removes standard farming operations from the County’s noise regulatory framework, allowing agricultural activities to operate without being constrained by the Chapter 9-404 noise limits—so long as those activities are consistent with normal agricultural practice. However, the proposed dairy manure digester is not considered normal agricultural practice, so stationary noise sources must be considered as non-exempt.

The digester and biogas facility, like the existing dairy, will operate 24-hours per day, 7-days per week. Pursuant to the San Joaquin County Development Title Section 9-1025.9(b), Part II, proposed projects that would create new stationary noise sources are required to mitigate the noise levels so as not to exceed noise level standards. The noise-generating component of the project will be the compressors needed in the biogas to biomethane and transfer of the biomethane to the transport trucks. The compressors will be enclosed in the biogas upgrade container and will generate approximately 68 dBA at 50 feet. At approximately 600 feet from the enclosed compressors to the closest on-site residence, attenuation of the noise would lower it to less than 50 dBA. New processing operations are expected to slightly increase the ambient noise levels in the immediate area within the dairy. The stationary noise standard for daytime (7:00 a.m. - 10 p.m.) is 75 dB for nighttime (10:00 p.m. - 7:00 a.m.) it is 65 dB (Table 9-404.040 in the San Joaquin County Development Title). Therefore, the project's likelihood of generating substantial temporary or permanent increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance are expected to be less than significant.

- b) As the project will be constructed on an existing engineered pad, no heavy vehicular or compaction equipment will be used for this project. Thus, there will be no excessive groundborne vibration or noise levels exposure of persons by the project.



- c) The project site is not located within an airport land use plan or within two (2) miles of a public airport or public use airport. The nearest public airport is the Stockton Metropolitan Airport, 14 miles north of the project site. Therefore, no impact would occur.

The project site is not located within two miles of a private airstrip. Therefore, no impact would occur.

4.13.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.13.4 Conclusion

Based on the impact discussion above, potential impacts associated with noise would be less than significant. There would be no impact on private or public airports. Therefore, no mitigation is required.

4.14 Population and Housing

Population and Housing	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.14.1 Setting

San Joaquin County has a population of 815,000 as of 2025. (World Population Review, 2025). The unemployment rate for 2025 is 6.8% (CA Employment Development Department)



- a) The project site is located in an agricultural area and is not within or adjacent to suburban residential development. There is no suburban development on the project site. East Brady Road dead ends about a quarter of a mile east of the project site. The project will employ 1.5 new staff to operate and care for the dairy digester and biofuel facility.
- b) The residences on the property for use by dairy employees will remain.

4.14.2 Impact

- a) Given that only 1.5 new staff will be required to operate and maintain the project and with the county having an unemployment rate (as of September 23, 2025) of 6.8%, it is expected that any new hires will already live in the county area; therefore, the project is not expected to induce population growth in the area. Therefore, no significant impact would occur.
- b) There will be no displacement of any residence. Therefore, the project will not have an impact.

4.14.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.14.4 Conclusion

Based on the impact discussion above, no impact associated with population and housing would occur.

4.15 Public Services

Public Services	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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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 other performance objectives for any of the public services:



b. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.15.1 Setting

- a) Existing public services have capacity to accommodate 3 new employees. No new government facilities will need to be built.
- b) Existing fire protection and suppression on the project site, The Lathrop-Manteca Fire Protection District provides service to the existing dairy, though no calls for such services have been required. There is existing onsite fire protection and fire emergency equipment. The project proponent will pay required fire fees and adhere to the requirements from the San Joaquin County Ordinance Code and Fire Codes.
- c) The project area is in an unincorporated area of San Joaquin County with law enforcement services are provided by the County Sheriff’s Department in 7000 Michael Canlis Blvd, French Camp, CA. The dairy and project site will operate 24 hours per day, 7 days per week with working staff onsite at all times. The proposed facility does not anticipate additional needs or services from the Sheriff Department.
- d) The project will not generate additional residential population that would create additional demand for schools or additional park services within San Joaquin County. Therefore, the project would have no impact on schools.
- e) The proposed project does not include construction of housing and would not generate an increased demand for parks. Therefore, the project would have no impact on parks.
- f) Other public facilities that are typically affected by development projects include the San Joaquin County Library and County roads.

4.15.2 Impact

- g) The project will not result in impacts associated with the provision of existing governmental facilities nor require the construction of any new facilities. Fire Protection. No impact.
- h) Police Protection. No impact.
- i) Schools. No impact.



- j) Parks. No Impact.
- k) Other Public Facilities. Implementation of the proposed project is expected to result in less than significant impacts on public facilities.

4.15.3 Mitigation

Additional mitigation proposed by Orland is not necessary.

4.15.4 Conclusion

Based on the impact discussion above, impacts associated with public services would be less than significant.

4.16 Recreation

Recreation	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.16.1 Setting

The San Joaquin County General Services Department oversees the San Joaquin County Parks and Recreation Division, which operates and maintains approximately 997 acres of parkland, consisting of nine (9) regional and twelve (12) non-regional parks. With opportunities for fishing, camping, boating, and various other activities, the Division has 129 rental facilities, including 23 picnic shelters, 68 campsites, 21 boat slips, and 17 sports fields.



In addition, Caswell Memorial State Park 2.5 miles south of the project site includes picnic areas, hiking trails and cycling lanes. It is located along the Stanislaus River covering more than 250 acres. The State Park Campground is located east and adjacent to the park.

4.16.2 Impact

- a) The proposed project would not create a new use that would generate population growth or increase demand for existing or new recreational facilities. Therefore, deterioration of existing facilities would not occur because of the proposed project. The proposed project would not include recreational facilities or require the expansion of existing recreational facilities. Therefore, no impact would occur.
- b) The proposed project would rely on obtaining employees from the local workforce and would not induce additional growth to the area. It does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impact would occur.

4.16.3 Mitigation

Based on the impact discussion above, no impact associated with recreational facilities would occur; therefore, no mitigation is required.

4.16.4 Conclusion

Based on the impact discussion above, no impact associated with recreational facilities would occur; therefore, no mitigation is required.

4.17 Transportation

Transportation and Traffic	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

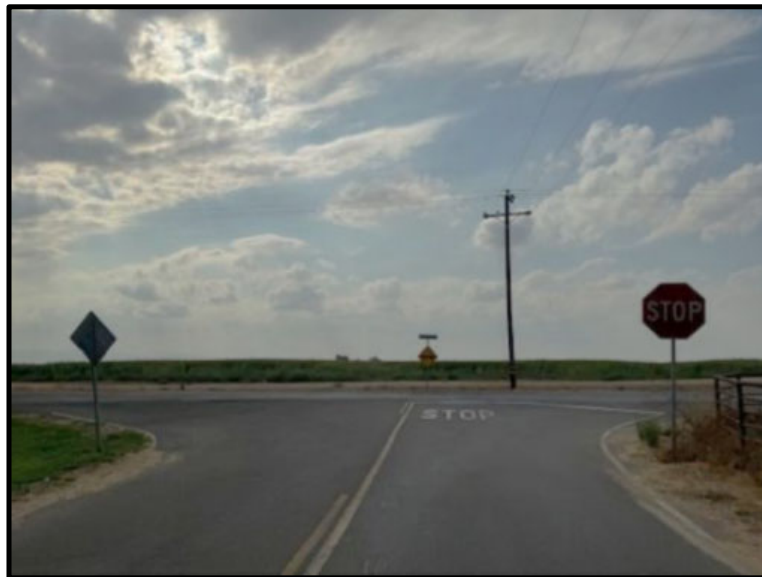


Transportation and Traffic	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.17.1 Setting

The sole access to the project site is off of Manteca Road, a San Joaquin County-maintained two-lane rural arterial roadway. Access to the site will be via an all-weather, paved road, East Brady Road. This all-weather access roadway currently allows and will allow support vehicles and employees/visitors to enter and navigate the site. Entry to the site access road will be approximately 2,500 feet southwest of the intersection of Manteca Road and East Brady Road.

Figure 4-8: E. Brady Road/Manteca Road Intersection



The San Joaquin County Public Works Department has traffic count data for E. Brady Road east and Manteca Road north of E. Brady Road. While the data is dated, it still reflects traffic patterns near the proposed project site and may be lower than current volumes. The traffic count data from 2014



indicated a average daily trips of 97 vehicles going both ways. Traffic on Manteca Road north of Brady totaled 1300 ADT.

Anticipated Traffic Generation. The proposed project is expected to run 7 days a week, 24 hours a day, for 365 days per year. Vehicular traffic associated with the proposed project include truck collection of the biogas from the Orland projects and employee vehicles. Truck collection services are estimated to be 12 trips per month.

Employees are on site 7 days a week, 24 hours a day. For environmental impact review purposes, increased employee vehicle trips from the proposed projects are estimated at 1.5 employees per day, 7 days a week, each making 1 round trip commute to the dairy.

4.17.2 Impact

- a) The proposed project is not expected to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. No impact is expected.
- b) With low volume ADTs, the project will not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Construction Traffic. Project construction activities would generate new vehicle trips on the local roadway network associated with equipment and materials hauling to and from the project site, construction worker transportation to and from the site, and the hauling of equipment and materials within the project area. Construction-related traffic would be expected to include the use of excavation equipment, haul trucks, and various deliveries of material and equipment occurring throughout the construction period. These trips would represent a minor and temporary increase in traffic volumes on Manteca Road and other local roads in the project vicinity. The temporary increase in vehicle traffic due to construction is not anticipated to conflict with any program, plan, ordinance, or policy that addresses the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Operational Traffic. The project would increase vehicle trips on local roadways by only 4 per day (8 round trips). Therefore, the proposed project would not result in significant travel delay impacts on local roadways accessing the site and would not be expected to conflict with a program, a plan, an ordinance, or a policy addressing the circulation system. In addition, according to the Governor's Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA, "...projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact." Thus, the project traffic impacts are less than significant.



- c) Although the project would increase vehicle traffic on the site access route, the increase in vehicle trips would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or due to incompatible uses (e.g., farm equipment). The proposed project would not be expected to conflict with a program, plan, ordinance or policy addressing transit, roadway, bicycle, and pedestrian facilities. Therefore, this impact would be less than significant.
- d) Dairy access has been designed so it does not result in inadequate emergency access. The project would have no impact on access, and no changes are necessary. Access will be as is shown in Figure 1-2.

4.17.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.17.4 Conclusion

Based on the impact discussion above, potential impacts associated with traffic and transportation would be less than significant.

4.18 Tribal Cultural Resources

Tribal Cultural Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|



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- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.
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4.18.1 Setting

The Central California Information Center replied to a request for any information of a historical or cultural value at the project site (Appendix B – Central California Information Center Response to an Extended Records Search - Orland Power Solutions, 9/23/2025).

- a) The project site is not associated with any significant event or trend in American history, nor has it been directly associated with persons significant in our past. A historical resource is defined as a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old.
- b) Additional review of records indicates that the proposed project does not contain any recorded indigenous-period/ethnographic-period cultural resources.

4.18.2 Impact

The project site is not expected to yield important information about prehistory or history. The project site is not considered a historic property, as defined in Section 106 of the National Historic Preservation Act nor does it qualify as a historical resource under CEQA. Given the extent of known cultural resources, there is low potential for locating such resources within the proposed area. Also, there are no buildings 45 years or older that would be altered or otherwise affected by the project.

There are no known tribal or other cultural resources within the project site or vicinity. In the unlikely event that significant resources are uncovered during construction activities, construction activities shall cease in the area of the discovered artifacts and construction staff will avoid altering the materials and their context until a qualified cultural resources professional has evaluated the site. The identified cultural resources should be recorded on DPR 523 (A-L).

Therefore, implementation of the project would have no impact on 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.



4.18.3 Mitigation

- a) Mitigation proposed by Orland is not necessary.
- b) If archaeological resources are encountered during project-related activities, work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. If human remains are discovered, California Health and Safety Code Section 7050.5 requires the protection of the discovery and notification of the county coroner, who will determine if the find is Native American. If the remains are recognized as Native American, the coroner shall then notify the Native American Heritage Commission (NAHC). California Public Resources Code Section 5097.98 authorizes the NAHC to appoint a Most Likely Descendant (MLD) who will make recommendations for the treatment of the discovery.

4.18.4 Conclusion

Based on the Impact discussion above, no impact on historical, tribal or cultural resources would occur as a result of the proposed project.

4.19 Utility and Service Systems

Utilities and Service Systems	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Utilities and Service Systems	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.19.1 Setting

- a) The project will result in the relocation or construction of expanded storm water drainage and electric power facilities, Existing onsite water and wastewater facilities have been designed to address the needs of the dairy.

The existing storm water drainage facilities are designed to discharge into the manure ponds. They have to be constructed, operated, and maintained to retain all wastewater generated during the storage period (maximum period of time anticipated between land application of wastewater), together with all precipitation on and drainage through manured areas, feedstock storage areas, and waste storage areas up to and including during a 25-year, 24-hour storm.

- b) Three wells currently extract water from the groundwater basin to provide all that is needed for the dairy. No public water supply system is used.
- c) No public wastewater treatment is currently necessary for dairy operations.
- d) Solid waste removal is currently done by a private waste haulage company that disposes of the material at a nearby public landfill.
- e) The dairy currently complies with federal, state, and local statutes and regulations related to solid waste disposal.

4.19.2 Impact

- a) No impact. No additions or modifications will be necessary to accommodate the proposed project.
- b) No impact. No additions or modifications will be necessary to accommodate the proposed project.



- c) No impact. Public wastewater treatment is not needed for current dairy operations.
- d) No impact. The project will not generate any solid waste requiring public landfill disposal and will in fact consume much of the solid waste (as manure) currently being transported to the public landfill.
- e) The proposed project would comply with all applicable federal, state, and local regulations. Therefore, impacts would be less than significant. The in-vessel digestion of the dairy manure must comply with the San Joaquin County Local Enforcement Agency’s Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

4.19.3 Mitigation

Mitigation proposed by Orland is not necessary.

4.19.4 Conclusion

Potential impacts associated with utilities and service systems would either have no impact or be less than significant.

4.20 Mandatory Findings of Significance

Mandatory Findings of Significance	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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Would the project:				
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, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Mandatory Findings of Significance	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.20.1 Impact

- a) As described throughout the impact analysis in Section 4, Evaluation of Environmental Impacts and through project design, the proposed project would not result in any significant impacts to the environment. The new facilities will be sited on an existing compacted dirt pad would not require any additional demolition, land clearing, excavation, grading, or vegetation removal activities. Implementation of the proposed project would not significantly degrade the quality of the environment, 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Therefore, impacts would be less than significant.
- b) As described throughout the impact analysis in Section 4, Evaluation of Environmental Impacts and through project design, the construction of the proposed project would not result in any individually limited, but cumulatively considerable impacts to the environment. Construction would be completed in compliance with San Joaquin County Building Permits and in accordance with the California Building Code, and all associated construction activities would be performed in compliance with County ordinances.

Operation of the proposed project is not expected to significantly contribute to cumulative impacts in the project area. As discussed in Sections 4.3, Air Quality, and 4.7, Greenhouse Gas Emissions, impacts associated with air quality and greenhouse gas emissions resulting from the proposed project would not exceed established thresholds and would be less than significant, and in fact the resulting operations of the business will be a significant net benefit to the air quality and greenhouse gas reduction in the area. As described in Section 4.16, Transportation and Traffic, vehicle trips within existing permitted trip limits are considered negligible despite the preexisting



LOS at relevant intersections and roadways. As discussed in Sections 4.14, Public Services, 4.15, Recreation, and 4.17, Utilities and Service Systems, the proposed project would not place a new demand on public services, facilities, or utilities that could result in cumulative impacts. Therefore, impacts associated with the proposed project are not considered cumulatively considerable and would be less than significant.

- c) The proposed project is not expected to result in environmental effects that would cause substantial adverse effects on human beings indirectly or directly. As discussed previously, the new facility would be constructed in compliance with the California Building Code as well as the existing County Building Permits and CVRWQCB requirements. It, therefore, is not expected to result in a substantial adverse effect on humans. Therefore, impacts are less than significant, and the reduction in negative air quality and greenhouse gas emissions should result in a net beneficial effect on the local population.

4.20.2 Mitigation

There are no mitigation measures proposed by Orland.

4.20.3 Conclusion

Based on the impact discussion above, potential impacts associated with the proposed project would be less than significant;