Colusa County
Initial Study
Evaluation of Environmental Impacts

1. Project Title: California Renewable Carbon (CRC)
Williams Production Facility
PD-21-19

2. Lead agency name and address: Colusa County
Community Development Department
1213 Market Street
Colusa, CA 95932

3. Contact person and phone number: Greg Plucker, Community Development Director
530-458-0483, gplucker@countyofcolusa.com

4. Project location: The site of the production facility is located north of Myers Road and east of Frontage Road south of Williams (formerly the Olam Plant); it is located primarily on APNs 017-090-062 and 017-090-070 (Parcel Map attached in Appendix A; Plans attached in Appendix K). Upgrades to a PG&E electrical line running from the production facility site north along Frontage Road to Husted Road and Husted Lateral Road and then to the PG&E Williams Generating Station in the City of Williams is also required.

5. Project sponsor's name and address: **California Renewable Carbon, LLC (CRC)**
Erin Heupel, PE, Environmental Manager
513 4th Street
Gwinn, MI 49841

6. General Plan designation: **Industrial (I) (production facility); PG&E utility easement for the electrical line upgrades**

7. Zoning Classification: **Heavy Industrial (M-2) (production facility); PG&E utility easement for the electrical line upgrades**

8. Surround land uses and setting: **See Project Description below**

PROJECT DESCRIPTION

Overview

California Renewable Carbon, LLC (CRC) proposes to repurpose an existing facility in Colusa County to construct a new renewable biocarbon production facility. The new facility will use CRC's patented non combustion technology to convert sustainably sourced biomass into renewable biocarbon products. The new facility will use self-generated renewable biogas for

process energy as well as generate and export renewable electricity to the grid. The new biocarbon process will be net water positive and carbon negative on a lifecycle basis. The facility also will significantly reduce regional air emissions by thousands of tons per year by converting locally sourced biomass such as orchard rotations and trimmings, that otherwise undergo open burning or land disposal, into renewable biocarbon products. CRC's products will be used to displace fossil-based products and reduce environmental impacts from metals production, energy generation, and crop production, and to purify the air and water. CRC will create more than 65 direct clean-tech jobs working toward environmental improvement.

CRC proposes to install and operate a biocarbon production facility and associated transmission (gen-tie) line using renewable biomass at 6229 Myers Road in Williams, CA (CRC Williams facility or proposed Project). The purpose of the proposed Project is to use renewable biomass, primarily in the form of orchard rotations and trimmings, to produce a biocarbon product using a net water positive, non-combustion process involving thermal conversion of biomass. The proposed facility would produce up to 250,000 gross tons of renewable biocarbon per year and includes biomass dryers, process heaters, pelletizers, and a heat recovery/cogeneration unit. The process would use self-generated biogas for process energy and would provide up to 10 megawatts (MW) of net electric power (17 MW gross) for export sale to Pacific Gas and Electric (PG&E) through interconnection to either a PG&E 12 kilovolt (kV) distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station. The Project involves establishment of a new electrical generation tie line (gen-tie line) for export of electricity to the grid that would involve upgrades to either the Williams 1101 12 kV distribution line or Wadham 60 kV power line. Both electrical lines occur on the same set of power poles; upgrades to either of the lines would involve replacement of some or all of the power poles and installation of new conductor (line). The proposed Project would also include improvements to an existing rail spur system on the production facility property which interconnects with the Union Pacific Railroad tracks adjacent to the property, and the addition of rail spurs on the property.

The Project objectives include the following:

- Produce high performing and highly sustainable biocarbon products that can be utilized in the global market to reduce environmental impacts from metals production, energy generation, and crop production, and to purify air and water;
- Reduce local and global air pollutants, including greenhouse gas emissions, by converting renewable biomass, that otherwise would undergo uncontrolled open burning or disposal at a landfill, into biocarbon products; and
- Utilize self-generated biogas for process energy and to export electricity to the grid.

Location and Project Background

The production facility site is located at 6229 Myers Road in unincorporated Colusa County, approximately 1.4 miles south of the City of Williams at the northeast corner of the intersection of Myers Road and Frontage Road (Figure 1). The 49.2-acre site currently accommodates the former Olam Tomato processing facility, comprising approximately 161,000 square feet of structures and supporting infrastructure including existing buildings, an existing rail spur, and two existing water wells. The site is adjacent to the Wadham Energy Company facility, located just north of the Project Site with agricultural lands north of the Wadham facility, and agricultural land and residences to the east and south. The Union Pacific Railroad (UPRR) tracks

and Frontage Road run west of the site and Interstate-5 (I-5) is located further west. Orchard land with a single-family residence on a parcel zoned for Heavy Industrial (M-2) is located between Frontage Road and I-5 approximately 150 feet from the western boundary of the site. The site is located approximately 1,000 feet (0.3 mile) from I-5.

The PG&E electrical line that would require an upgrade generally runs along Frontage Road north from the facility to Husted Road and Husted Lateral Road and then through the City of Williams to the PG&E Generating Station.

A summary of the project components is provided in Table 1 followed by a detailed description of the project components.

Project Components

The process at the CRC Williams facility would involve the following components discussed in more detail below:

- Biomass (i.e., feedstock) receiving and sizing;
- Biomass drying;
- Non-combustion thermal conversion;
- Pelletizing;
- Pellet finishing and shipping; and
- Cogeneration.

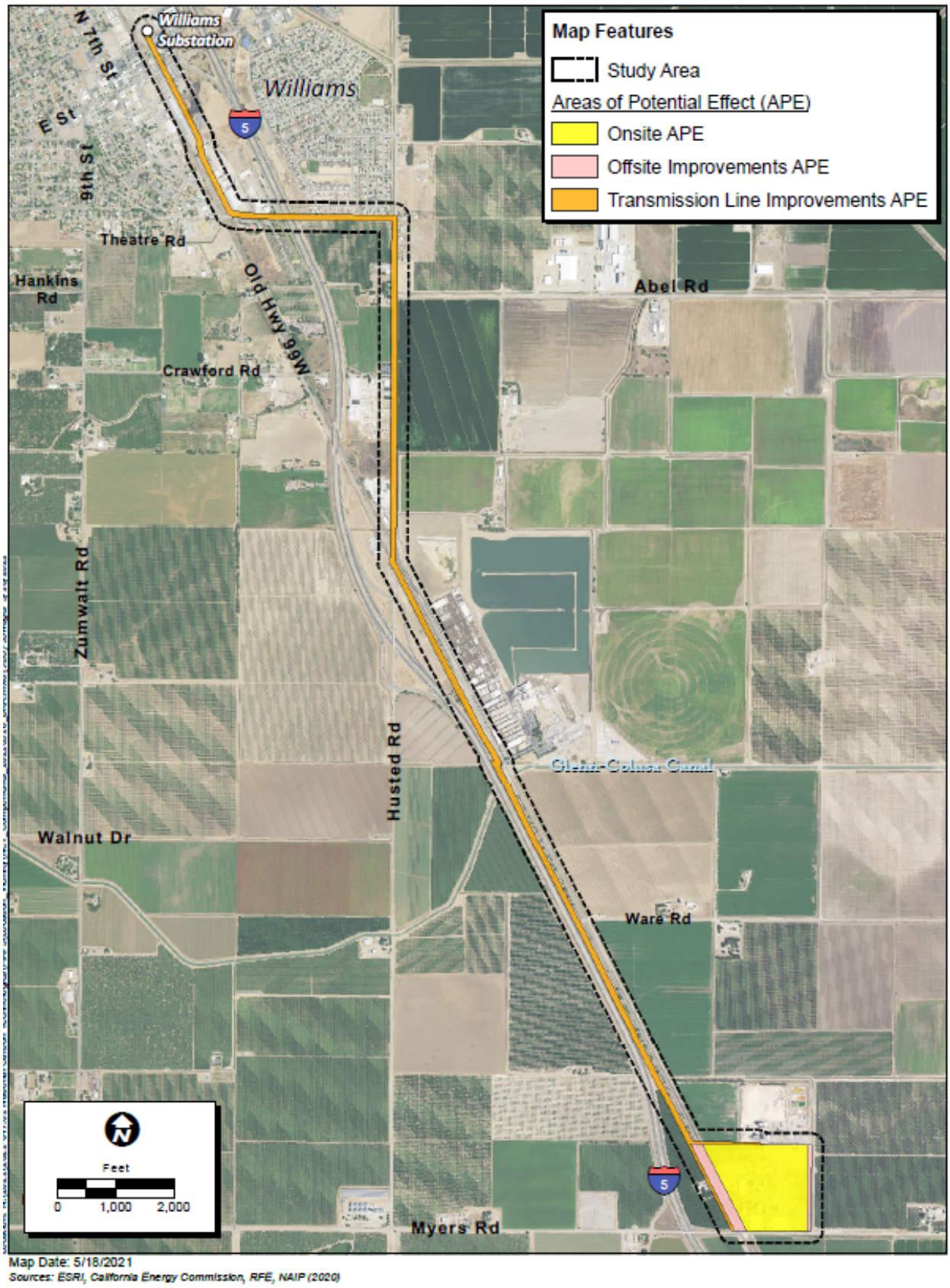
Proposed new buildings, chemical storage, rail spur improvements, utility improvements, and construction and operation details are also discussed below. A process flow diagram is shown in Exhibit 1. A Site Plan and Preliminary Grading and Drainage Plan are contained in Appendix K.

Biomass Receiving and Sizing

The biomass receiving and sizing work area has the largest footprint and would be located in the northern section of the property which is largely undeveloped. Biomass feedstock for the CRC Williams facility would be delivered to the facility via heavy trucks traveling eastbound on Myers Road from the Frontage Road to the shared paved access driveway with the Wadham Energy facility. Trucks would travel to the northeast corner of the property where they would enter the facility. New double-lane paved roads would be added at the north property boundary for the truck entrance/exit, a truck loop, and a truck loadout turnaround to and from the truck dump area (where biomass would be unloaded from trucks using a hydraulic truck dump into a receiving unit) (Exhibit 2). A second smaller area has also been designated for trucks equipped with walking floors to unload biomass.

Upon entry to the facility, trucks would first travel to a Truck Scale/Guard House. Then trucks would drive to two Hydraulic Truck Dumps where trucks would be unloaded into two receiving units. Biomass would be fed onto conveyor belts from the receiving unit and transported via the conveyor belts to a new Screening and Sizing Structure. In this structure, biomass material would be scalped (if necessary), screened, hammer-milled to further reduce size, and processed to remove adhered soil. A baghouse on the Screen and Sizing Structure would control dust

Figure 1 Project Location and Vicinity (8.5x11, color)



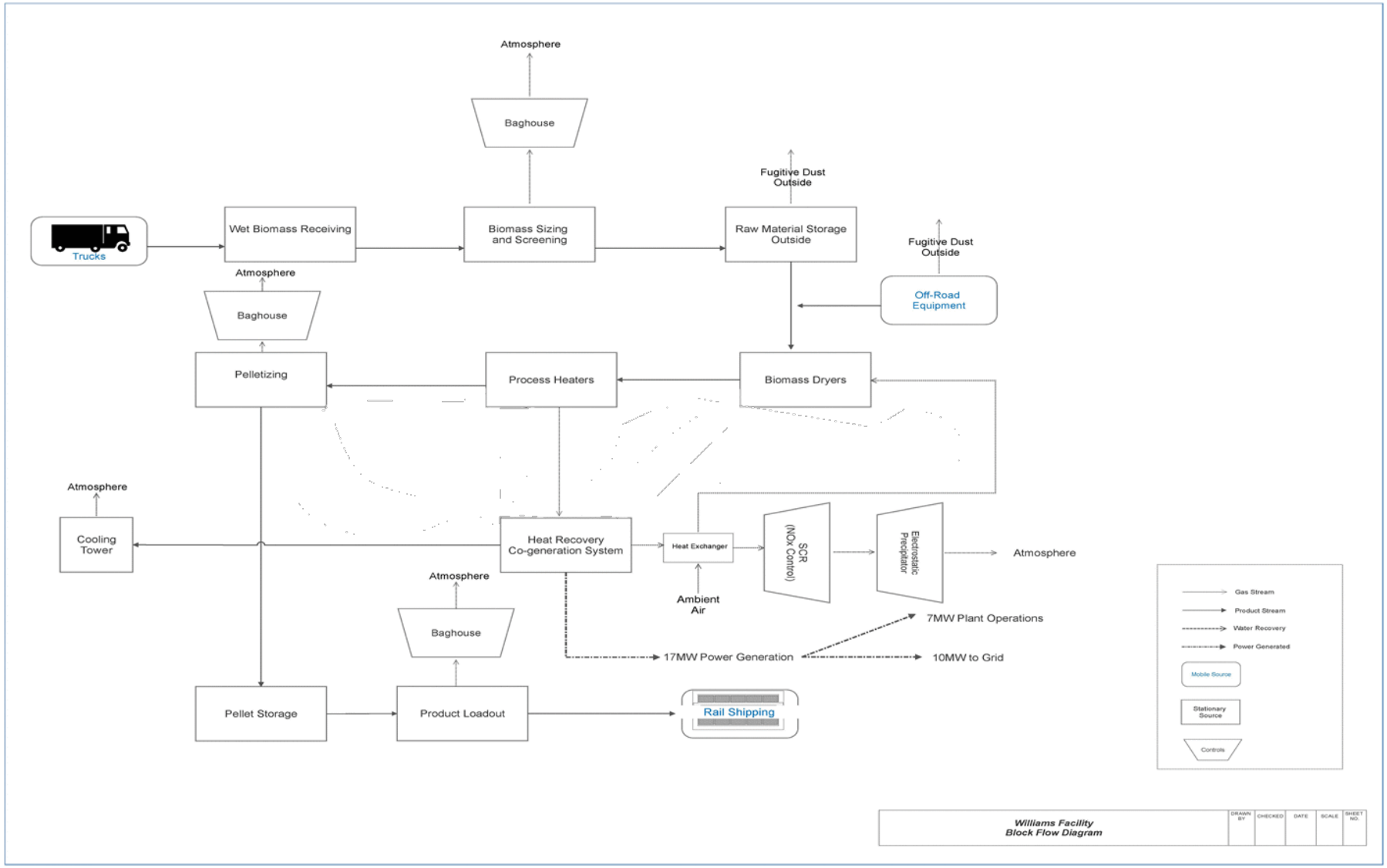


Exhibit 1 Process Flow Diagram

Table 1 Project Summary

Project Feature	**Description**
Property Size	49.256 acres gross; 48.538 acres net; 2,145,582.78 gross sf
APNs): 017-090-062-000 017-090-070-000	6229 Myers Road, Williams, CA 95987 28 acres 20.538 acres
Zoning	M-2 (Heavy Industrial)
Land Use Designation	I (Industrial)
Adjacent Land Uses (Zoning/Land Use Designation): North South East West	 M-2 (Heavy Industrial)/I (Industrial) E-A (Exclusive Agriculture)/AG (Agriculture General) E-A (Exclusive Agriculture)/AG (Agriculture General) M-2 (Heavy Industrial)/I (Industrial)
Existing Facility Use[1] Existing Infrastructure (unused equipment to be demolished by existing owner) No. of Employees No. of Truck Trips Water Use	Olam Tomato Processing Plant constructed in 1981 and operated until 2020 161,000 sf 500 peak season (June - Oct.); 100 off-season (Nov.-May) 300 truck peak trips per day 550 afy
Proposed Grading:	Net export of 12,509 cy
Feedstock Input	763,000 gross wet tons per year (assumed at 26 percent moisture content)
Product	250,000 gross tons per year renewable biocarbon and soil amendment co-product
Proposed Buildings: Pelletizing Building (existing Can Warehouse) Two Finished Pellet Storage Buildings (existing North Warehouse and Production Warehouse) Maintenance and Storage Building (existing Filler Room) Main Office/Maintenance/Parts (existing Main Office/Processing Room) Mechanical Shop/Parts Room (existing) Truck Scale/Guard Shack (existing Produce Building) Employee Entrance Guard Shack (existing Guard Shack) Administrative Building (existing HR Building) MCC Building (new 874 sf/20 feet high)/Four Existing MCC Buildings (existing) Screening and Sizing Structure (new)	171,000 total gross sf (10,000 sf new structures) (1,287,350 sf maximum allowable)
Proposed FAR	0.08 (Maximum Allowable FAR of 0.60)
Maximum Building Height	24 feet (existing building) (Maximum allowable is 100 feet)

Table 1 Project Summary

Project Feature	Description
Emissions Units: Baghouse on Screen and Sizing Structure (one baghouse) Baghouses on Pelletizing Building (one baghouse) Baghouse on Finished Pellet Storage Buildings (two baghouses) Cogeneration Unit (SCR/ESP) Stack (one unit) Cooling Tower (one unit)	155 foot high (60-inch diameter) stack on cogeneration unit (Maximum allowable is 200 feet)
Combustion Equipment (all other motors are electric): Biomass Dryers (2 units) (#1 and #2) Heaters	 Heat Recovery Cogeneration System with SCR Unit and ESP (1) Turbine Generator (1)
Chemical Use: Aqueous Ammonia Amines, Phosphate, Oxygen Scavenger, Additives, Oils, Fuel, Lubricants, Coatings, Adhesives	 18,000-gallon main storage tank (19.5% solution) and day tank associated with SCR Totes Routine operation and maintenance activities
Setbacks: Front/Rear/Side	 30 feet (30 feet required)/10 feet (10 feet required)/0 feet (allowed if fireproof walls)
Access Driveways: Trucks Employees	 Shared private driveway from Myers Road with Wadham Energy facility Access driveway from Myers Road
No. of Employees: Administrative Day Shift (Two Shifts) and Night Shift (Two Shifts) Daily Total	24/7 Operations with 90 percent up time (7,884 hours per year) 10 10 per shift (times four shifts) 50 (Weekdays)/40 (Weekends)
Parking Spaces: Standard/Accessible/Total	 250 (gravel)/10 (paved)/260 total
Heavy Truck Trips Per Day	125
Rail Cars Per Week	50
Water Demand: Non-Process/Site Dust Control/Process/Firewater Replenishment/Total	 1 afy/17 afy/1,004 afy/3 afy = 1,025 afy
Wastewater Discharge: Domestic (approx. 20 gallons per day per employee x 50 employees) Process Water Recycled Through System	 1,000 gpd (disposed of in existing onsite septic system comprising a 1,500 gallon septic tank & leach field) 1,004 afy
Natural Gas Demand: PG&E 8-inch Underground Line Emergency Generators	 12,410 therms (1,200,000 cubic feet of natural gas) per year 750 kW (1,000 hp) (powered by natural gas) (operated less than 200 hours per year)

Table 1 Project Summary

Project Feature	Description
Electrical Load: Supplied internally with backup from existing PG&E 12 kV Distribution Line and 750 kW natural gas emergency generator	7 MW (replace PG&E existing 480 volt with 4160 volt transformers)
Electricity Generation: Interconnection to either PG&E Wadham 60 kV power line or PG&E Williams 1101 12kV Distribution Line on Frontage Road to the PG&E Williams Generating Station	17 MW gross generated Up to 10 MW net supplied to the grid
Notes: [1]Mark Ross, Olam Plant Manager, pers. comm. May 20, 2021 afy = acre-feet per year APN = Assessor's Parcel Number cy = cubic yards ESP = electrostatic precipitator FAR = Floor Area Ratio gpd = gallons per day kV = kilovolt MCC Motor Control Center MW – megawatts SCR = Selective Catalytic Reduction unit sf = square feet	

emissions. Material from the Screening and Sizing Structure would then travel via conveyor belts to the Raw Material Storage area and would be stockpiled using a radial stacker (Exhibit 3). Fines removed during sizing would be transferred to a three-sided concrete structure and used as an agriculture soil amendment co-product.

The Raw Material Storage Area would consist of an existing large concrete slab adjacent to the existing product storage building. This area would have an 8-foot high push wall containment along both the eastern and southern boundaries of the stockpile. Sized biomass would then be transferred from the stockpiles using a front-end loader to a reclaimer where material would be loaded into biomass dryer feeder bins for the biomass drying process described below. Approximately 47 belt conveyors powered by electric motors would be used in this step of the process. Also, a new 874-square foot (sf) MCC Building would be constructed in this area.

Exhibit 2 Example Hydraulic Truck Dump

Exhibit 3 Example Radial Stacker

In summary, the Biomass Receiving and Sizing area would contain the following equipment and stockpile areas:

- One Truck Scale House/Guard Shack (converted from existing produce grading building)

- Two Hydraulic Truck Dumps (Lines 1 and 2)
- An unloading area for trucks with walking floors to unload biomass
- Screen and Sizing Structure
    - Scalping (i.e., Hog)
    - Screen
    - Hammermill
    - Fines removal
- Transfer of material from Screen and Sizing Structure to Raw Material Storage Area using a Radial Stacker
- Raw Material Storage Area
    - Material stockpiled and contained in an area with 8-foot push walls along the eastern and southern boundary of the stockpile area
    - A front-end loader would move material from stockpiles to a reclaimer
    - Conveyor to Biomass Dryer Feed Bins (Lines 1 and 2)
- Biomass Receiving and Drying Air Receiver (in support of the biomass receiving and biomass drying processes)
    - Air Compressor
    - Instrument Air Dryer
- New MCC Building

Biomass Drying

The Biomass Drying step represents the beginning of the core process; the process would occur in two identical production lines, Line 1 and Line 2. There are no buildings in this area and all equipment in this area would be located outdoors on existing concrete pads. Biomass would be dried in rotary dryers and then transferred to Process Heater Infeed Airlocks via conveyors.

In summary, the Biomass Drying area would contain the following equipment and equipment would be located outdoors:

- Dryer Infeed Belts from Biomass Dryer Feed Bins to Dryer Infeed Airlocks (Lines 1 and 2)
- Biomass Dryers (Lines 1 and 2) (i.e., Rotary Dryers)
    - Powered by natural gas during startup or after shutdowns, otherwise, powered by ambient air that is heated through heat exchangers in the cogeneration and process heater systems.
- Dryer Screw Conveyors (Lines 1 and 2)
- Dryer Product Storage Bins
- Process Heater Infeed Airlocks

Thermal Conversion

In the Thermal Conversion area, the dried biomass undergoes non-combustion thermal conversion creating a carbon substrate. This process would be located outside and north of the existing can warehouse building.

Pelletizing

In this area, moist carbon substrate is fed through mixers and pellet mills to achieve the target bulk density. Cooled carbon substrate would be fed onto four parallel belt conveyors that feed into four storage bins; two storage bin would be on each production line. Material from these bins would then be added to pellet mixers inside the existing Can Warehouse Building that would be converted to a Pelletizing Building.

The pellet mills would take the prepared carbon substrate and compress the material to form biocarbon pellets at the desired bulk density. One baghouse would be utilized for the pellet mills to minimize the amount of carbon dust emitted into the area. Baghouse exhaust would vent to the atmosphere from the Pelletizing Building. Carbon dust collected in the baghouse would be returned to the bin(s) for reintroduction into the process.

The pellets would travel through belt conveyors to the Finished Pellet Storage Buildings (described below).

In summary, the Pelletizing area would contain the following equipment:

- Carbon Bins (one each per Lines 1 and 2)
- Hopper (one per Lines 1 and 2)
- Feeder (one per Lines 1 and 2)
- Pellet Mills (three per Lines 1 and 2)

Water recovered would be used for a number of functions including utility stations and equipment washdown.

Pellet Finishing and Shipping

This work area includes a series of long conveyors from the Pelletizing Building to the existing retail building and north warehouse building that would be converted to Finished Pellet Storage Buildings. The conveyor from the existing retail building to the existing north warehouse building would pass over the rail spur before entering the building. Here the pelletized product would be stored before being loaded into rail cars for transport to the export facility. All product transport would be by rail during normal operations. Trucks would only be used if rail is out of service or due to other extraordinary circumstances. Eight rail cars would be loaded in the course of a normal day's operation.

Pellets would enter the Finished Pellet Storage Buildings through a common chute in the roof of the building and would fall to the floor at various points in the warehouse through the use of a tripper conveyor. From there, an operator would convey the pellets into storage piles within the building. Each warehouse would have capability of storing up to 3.5 days of pellets.

Under normal operations, an operator utilizing a front-end loader and reclaim system would transfer pellets to rail cars in the Rail Car Loadout area. A baghouse on each of the Finished Pellet Storage Buildings would control dust emissions from transfer of material to the Rail Car

Loadout. Loadout weight of the pellets would either be measured utilizing belt scales on the loadout conveyors, or through the use of rail car volume scanners.

In summary, the Pellet Finishing and Shipping area would contain the following equipment:

- Conveyors from Pelletizing Building to two Finished Storage Buildings
- Finished Pellet Storage Buildings (containing finished pellet storage piles) (converted from the existing retail building and north warehouse)
- Rail Car Loadout at the rail spur
- Pelletizing Area Air Receiver
    - Air Compressor
    - Instrument Air Dryer

Cogeneration

The process utilized by CRC would generate an excess of biogas which can be utilized for power generation in a cogeneration system. The cleaned biogas from the CRU systems would be sent to a Heat Recovery System comprised of a combustion chamber and heat recovery steam generator (HRSG) for the production of steam. Steam from the HRSG would be sent to a turbine generator and surface condenser for the production of electrical power for utilization within the facility, as well as for export sale to the grid.

A selective catalytic reduction (SCR) unit and electrostatic precipitator (ESP) would be used for environmental control of emission products. The cogeneration system would also comprise a cooling tower and a boiler feedwater system.

In summary, the Cogeneration System would contain the following equipment:

- Combustion Chamber and HRSG to SCR and ESP and Stack
    - Combustion Air Fan
    - Fuel Gas Booster Fan
- Turbine Generator
    - Powered by steam from the HRSG
- Cooling Tower
- Recovery of condensate and boiler feedwater

Chemical Storage

A new 18,000-gallon storage tank for 19.5 percent aqueous ammonia would be constructed onsite for use in the SCR. Additives for amines, phosphate, and an oxygen (O_2) scavenger as boiler feedwater additives would all be stored in totes with meters.

Administrative Buildings

The following existing buildings would be converted to administrative buildings for the facility where their existing use would continue: the main office, a guard shack for the employee

entrance, another administrative building near the employee entrance labeled the HR Building, the mechanics shop/parts room to the west of the new Finished Pellet Storage Building, and the processing room connected to the main office that would continue to be utilized for maintenance and parts storage.

Rail Spur Improvements

The Project would involve improvements to, and extension of, an existing rail spur system on the property that interconnects to the UPRR tracks that run adjacent to the Project Site and along I-5. Improvements to the existing rail spur may involve improvements to the rail spur track (i.e., new ballast, ties, rail), signal improvements, and/or improvements to utility lines along the rail spur (electrical lines, fiber optic lines, etc.). Extension of the rail spur is also proposed along the western boundary of the CRC Williams facility property. New track, signal facilities, and utility lines would be installed in this area in support of the rail spur. Finally, a new rail spur loadout area would be constructed for the Project.

Improvements to the UPRR tracks may be required by UPRR, including potentially new ballast, ties, rail, and/or signal or utility line improvements on or near the UPRR tracks. All improvements to the existing rail spur system would be coordinated with UPRR. Any improvements within the UPRR right-of-way would be subject to UPRR review and approval. No new public crossings of the UPRR tracks or right-of-way are proposed.

Utilities

Water Supply

Three water wells have been drilled on the facility. The locations of water well nos. 1, 2, and 3 are shown in the site plan in Appendix K. According to the Waste Discharge Requirements (WDR) for the Olam Tomato Processing Facility[1] (Central Valley Regional Water Quality Control Board [RWQCB] 2018), two onsite water wells (SW-1 and SW-2) provided water for potable use and tomato processing. Both wells were disinfected via chlorination prior to use for drinking water for the Olam operation. Water well SW-1 (water well no. 1) was perforated from 330 to 410 feet below ground surface (bgs) but has been plugged and abandoned.

Water well SW-2 (water well no. 2) was drilled in 1981 and is perforated from 360 to 440 feet bgs (according to the well drillers log). Water well no. 2 is located between the existing Can Warehouse and Production Building (proposed to be reused as the Pelletizer Building and one of the Finished Pellet Storage Buildings). A pump test performed on water well no. 2 in 2015 indicates that the well is able to pump up to 900 gallons per minute (gpm).

[1] Regional Water Quality Control Board, Central Valley Region (RWQCB). 2018, Waste Discharge Requirements for Olam West Coast, Inc. and T&P Farms, Olam West Coast Williams Facility, Colusa County, Order R5-2018-0006.

Water well no. 3 is located just south of the existing rail spur on the western side of the property. It was installed in 2016 and is perforated between 300 and 420 bgs (according to the well drillers log).

Water well nos. 2 and 3 are proposed to supply process water to the facility. The total projected demand for process water for the cogeneration unit would be a maximum of 1,004 acre feet per year (afy). Additional process water demand would be met by water recovered and recycled from the biomass drying process. Approximately 17 afy would be utilized for dust control around the facility by water trucks.

Pumps from both water well nos. 2 and 3 currently supply water to the existing facility including an existing fire water tank. New water lines would be installed for the new systems, including the fire suppression system for the facility. Approximately 3 afy would be utilized to replenish the firewater supply each year.

CRC plans to treat well water to use as the potable water supply for the facility. The total projected demand for potable water for the facility would be one afy for a total maximum water demand of 1,025 afy for the Project. CRC would apply for a non-transient non-community water system permit from the Colusa County Environmental Health Department for use of well water as a potable water supply for the facility.

Recycled Process Water

The CRC Williams facility is designed to recycle and reuse water utilized for the process. Storage of process water in the existing onsite wastewater storage pond (shown in the Site Plan in Appendix K) may be required for the Project under normal operations. An Industrial WDR order would be obtained from the RWQCB for use of the wastewater storage pond for process water. The existing storage pond was permitted for use for the Olam Tomato Processing Facility as a storage pond for discharge of tomato processing wastewater (RWQCB 2018). The storage pond is reported to have 2.7 million gallons of storage capacity with two feet of freeboard. The pond is lined with a 12-inch liner constructed of imported clay mixed with native material. The WDR describes the liner as follows:

> *The liner was engineered using permeability testing to establish the ratio of native on-site materials blended with imported clay. A 50/50 mixture was used during construction to ensure the permeability of the liner was minimized. Four to six inch lifts were placed and compaction testing was conducted to ensure greater than 95 percent compaction. Pond construction information was previously reported in an Amended Report of Waste Discharge dated 30 August 2001." (WDR Order No. R5-2018-0006, page 4).*

The Olam Tomato Processing Facility was authorized under the WDR to send wastewater and solids to offsite Land Application Areas (existing agricultural land) for use as irrigation and composting facilities. As a result, the existing storage pond has a discharge pipeline leading to an offsite unlined agricultural irrigation conveyance canal located to the east of the property. This pipeline would be properly abandoned and removed by Olam prior to occupancy by CRC.

In addition, one lysimeter (LF-1) and two groundwater monitoring wells (MW-8 and MW-9) (shown in the Site Plan in Appendix K) were installed on the property as required for the industrial wastewater WDR issued to the Olam Tomato Processing Facility. The lysimeter and monitoring wells would all be plugged and abandoned by Olam to close out their WDR.

Non-Process (Domestic) Wastewater Disposal

An onsite existing 1,500-gallon septic tank and leach field with an expansion area are located on the east side of the property under the existing gravel parking area for disposal of domestic wastewater. Use of this septic system is proposed for the new CRC Williams facility for non-process (domestic) wastewater disposal. The total projected domestic wastewater volumes generated from the facility would be 1,000 gallons per day (gpd), which would be less than Olam's past use of the facility.

Storm Water Drainage Retention and Treatment

According to the WDR for the Olam Tomato Processing Facility (RWQCB 2018), process wastewater and storm water runoff are collected and distributed by the same system of drains and pipes at the facility. All rainfall runoff generated from the paved and roofed areas of the facility, as well as process wastewater pipelines, currently drain into a series of sumps, which eventually drain into one main wastewater sump located in the southeast portion of the property.

According to the WDR for the Olam Tomato Processing Facility (RWQCB 2018), prior to 2006, storm water discharges and process wastewater discharges from the facility were pumped from the main wastewater sump to a storm water estuary with an estimated storage capacity of 1.2 million gallons in the southeastern corner of the facility. The WDR reports that isolation valves in the main wastewater sump also allowed wastewater to gravity flow to the storm water estuary. At the end of 2006, the storm water estuary was drained and converted to the existing parking area. After 2006, storm water runoff and process wastewater from the Olam facility drained to the main wastewater sump, where it was then pumped directly to the wastewater storage pond.

Improvements would be made to the existing structures and facility to ensure that process wastewater is recycled and reused in the process to the maximum extent possible. Drainage in the existing process area would continue to drain to existing onsite intakes that would continue to lead to the main wastewater sump where storm water would continue to be pumped to the wastewater storage pond (Pond #1) (see Site Plan in Appendix K). Drainage improvements would be made in the northern area of the site to ensure that storm water would drain to a newly constructed storm water pond (Pond #2). Once at Pond #2, collected storm water would be expected to percolate into the soil. In the event of an extreme 100-year storm event, water from Pond #2 may exit the site through a weir constructed on the outlet of the Pond #2 and discharge to area ditches. The discharge rate would be equivalent to existing site conditions prior to CRC improvements. Pond #1 is designed for total containment of such an event. A preliminary grading and drainage plan is contained in Appendix K. A Drainage, Hydrology, and Water Quality analysis is contained in Appendix G which contains drainage calculations for existing conditions and post-construction conditions for the CRC Williams facility.

Solid Waste Disposal

Solid waste generated by employees and administration of the facility would be disposed of using the local service provider. Material would be recycled to the maximum extent following County guidelines. Solid waste generated for the proposed facility is expected to be less than solid waste generated during Olam operations due to the lower number of employees associated with the CRC operation.

Natural Gas

The CRC Williams facility would be served by an existing PG&E 8-inch underground natural gas line and header located on the west end of the facility. Natural gas would be used to power all combustion equipment initially upon startup and to restart equipment after a shutdown. Natural gas would be used to power an emergency generator proposed for the facility.

Electricity

The electrical load for the CRC Williams facility would be 7 MW which can be met by the facility's cogeneration system. However, two PG&E 12 kV distribution lines currently serve the property (Williams 1101 and Williams 1102). Existing 480-volt transformers would be replaced with 4160 v transformers to support the use of PG&E's 12 kV distribution lines as a backup power supply to the facility.

The process would use self-generated biogas for process energy and would provide up to 10 MW of net electric power (17 MW gross) for export sale to PG&E through interconnection to either PG&E's Williams 1101 12 kV distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station. Both existing lines are located on the same power poles along Frontage Road running north to the PG&E Williams Generating Station in Williams. It is assumed that PG&E would require reconductoring (replacement of the line) along this route and may require replacement of some or all of the power poles along this route.

For interconnection to the Wadham 60 kV power line, a new 60 kV gentie line would be required on the CRC Williams facility that would interconnect with the Wadham 60 kV line with a new three-breaker ring bus that would be located on the northwest corner of the CRC Williams facility. Improvements at the Williams Generation Station are not anticipated for interconnection to the 60 kV power line. Alternatively, for interconnection to the 12 kV distribution line, a new transformer or circuit breaker may be required at the PG&E Williams Generating Station (within the station facility).

Construction

Construction at the CRC Williams facility, including offsite improvements required for the interconnection to PG&E's electrical system and any improvements to the interconnection to the UPRR tracks, is expected to take 14 months to complete using approximately 42 construction workers. Construction is targeted to start in 2022 with startup in 2023.

Olam is currently removing processing equipment that would not be retained. CRC would refurbish the remainder of the structures for use by CRC. Minor demolition (e.g., of existing concrete pads, pipe racks etc.) may be required to construct the CRC Williams facility. A preliminary grading and drainage plan is shown Appendix K.

Operation

Source of Renewable Feedstock

The CRC Williams facility can process up to 763,000 gross wet tons of renewable biomass (feedstock) per year. The source locations for renewable feedstock would primarily comprise orchards in the region, and primarily within Colusa County. Material would consist of trimmings and/or full pull outs from orchard rotations primarily from walnut and almond orchards. Source material would either be collected at individual locations or satellite collection locations depending upon individual agreements with growers.

Feedstock is expected to be chipped in the field and would likely include trimmings, large limbs, and trunks. CRC is working with local chipping companies that provide these services to the farms in the area. Trimmings received are expected to be between 1.5-inches to 6-inches in diameter. Feedstock moisture content is assumed to be 26 percent.

Feedstock would be untreated and would not be imported from outside of the State of California. Transport of feedstock would comply with the pest management and pest exclusion requirements of the County Pest Management and Pest Exclusion Programs and the California Department of Food and Agriculture Plant Health and Pest Prevention Services Division Programs.

Truck Trips

Approximately 125 heavy truck trips per day would deliver renewable feedstock to the CRC Williams facility. Source locations for the renewable feedstock are expected to be primarily within 75 miles of the CRC Williams facility. Heavy trucks would utilize local area roadways to access Interstate-5 (I-5), to travel either north or south along I-5 to the CRC Williams facility. Heavy trucks would either utilize the I-5/Husted Road interchange to then travel southbound on the two-lane Frontage Road to the facility or utilize the I-5/Hahn Road interchange to travel northbound on the two-lane Frontage Road to the facility. Some truck trips could occur on eastbound and westbound Myers Road as well. Average truck trips are estimated to be 40 miles on average, with a standard range of 20 to 80 miles.

Rail Cars per Week

Approximately 50 rail cars per week (i.e., UPRR fully enclosed boxcars or intermodal equipment) would transport biocarbon product in bulk rail cars on UPRR tracks to one or more major ports in California and/or Oregon for ultimate transport of the biocarbon product via Handymax class cargo vessels (ships).

According to UPRR's gross weight maps, the tracks adjacent to the project site have the capacity to support heavy axle rail cars carrying 315,000 pounds (lbs) (157.5 tons) each for transport to major ports such as Portland, Oregon, or the ports of West Sacramento, Oakland, or Richmond in California.

Genessee & Wyoming, Inc. leases or owns the following locally managed freight railroads (i.e., short line railroads) that then lease the UPRR tracks in the region: California Northern Railroad Company CFNR #36 and California Oregon & Pacific Railroad, Inc. CORP #157. California Northern Railroad operates the freight service on the portion of track adjacent to the Project. Other freight services could be utilized depending upon the destination port.

Rail cars would be loaded at the proposed rail car loadout area. A new electric switching locomotive would be utilized on the property to move cars along the rail spur system.

In the event that product occasionally cannot be shipped via rail, product would be shipped by heavy truck via I-5.

Employees

On weekdays (Monday through Friday), a maximum of 50 employees would be present onsite, comprising 10 employees each for four shifts, and 10 administrative staff. On weekends (Saturdays and Sundays), a maximum of 40 employees would be onsite. Operations are proposed on a 24 hour, 7 day a week basis with anticipated 90 percent up time.

Mobile Onsite Equipment

Mobile onsite equipment would include upto four diesel front-end loaders as well as electric forklifts. Tier 4 engines will be used for all diesel equipment.

Facility Lighting

The minimal amount of lighting would be utilized for security and safety purposes for the facility. Existing site and building lighting (halide) would be reused where applicable. New LED lighting would be installed to provide site lighting along the process where required; egress and process area lighting would be installed in the new structures and outdoor process areas.

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

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

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.

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

Greg Plucker, Community Development Director (Project Planner)

August 30, 2021
(Date)

EVALUATION OF ENVIRONMENTAL IMPACTS:

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

2) All answers must take account of the whole action involved, including of-site as well as on-site, 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, and EIR is required.

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

5) Earlier analysis 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 that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

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

8) This is only a suggested form, and lead agencies are free 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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS – Except as provided in Public Resources Code § 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
c) In non-urbanized areas, substantially degrade the existing visual character or quality public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

Existing Setting:

The proposed Project site is currently the site of the Olam tomato processing facility and has a flat topography. The properties surrounding the proposed Project site are in agricultural production and are zoned agriculture, with the exception of the parcels that are immediately to the west and north of the property that are zoned M-2 (Heavy Industrial). The Wadham Energy facility is located to the north of the property. The closest residence is a single-family residence associated with agricultural production on the M-2 zoned parcel located approximately 150 feet to the west of the property. There is another residence, fronting Myers Road on the west side of I-5, located approximately 1,740 feet west of the Project site. The next-nearest residence sits approximately 2,150 feet east of the Project site on Myers Road. The site is located approximately 1,000 feet (0.3 mile) from I-5. Exhibits 4 and 5 display the visual aspects of the existing facility and the industrial property owned by Wadham Energy to the north.

The Project is not near any scenic highways or corridors and there are no scenic resources in the Project area.[2,3,4]

[2] Colusa County. 2012a. General Plan.
[3] Colusa County. 2012b. Final Environmental Impact Report for the General Plan.
[4]Caltrans. 2021. Scenic Highways. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed in June.

Exhibit 4 – Existing Olam Tomato Process Facility

Exhibit 5 – Property to the North (Wadham Facility)

Impact Discussion:

a-d) The Project would utilize all of the existing buildings on the Project site; all new buildings would be shorter than existing buildings. However, the color of new buildings has the potential to be incompatible with the existing visual character of the area. Mitigation Measure AES1 would ensure that all new buildings would be painted the same color as existing buildings. Therefore, impacts would be less than significant.

The tallest components associated with the new facility would be the new exhaust stacks at approximately 155 feet above ground level. However, they would be narrow in diameter (approximately 60 inches), and under the County's 200-foot height limit for accessory structures. This is visually comparable to the nearby existing processing facilities at the Olam facility shown in Exhibit 4, as well as the Wadham Energy facility to the north shown in Exhibit 5. Therefore, the proposed Project would not have any adverse effect on a scenic vista or substantially degrade the visual character of the surrounding area.

Facility lighting would be similar in character with the existing lighting at the Olam facility. However, new lighting has the potential to impact adjacent parcels as well as travelers along I-5. Impacts would be potentially significant without mitigation. Implementation of Mitigation Measure AES2 would ensure that new lighting is cast downward consistent with County ordinance. With implementation of Mitigation Measure AES2, impacts would be reduced to less than significant levels.

Finally, interconnection to PG&E's existing Williams 1101 12 kV distribution line or PG&E's Wadham 60 kV power line would be co-located on the same set of power poles adjacent to Frontage Road to the PG&E Williams Generating Station in Williams, could involve replacement of poles. Standard 65-foot wooden poles currently exist and could be replaced by taller steel poles. However, existing scenic vistas along the electrical line route comprise views of agricultural land in a relatively flat topography. Therefore, replacement poles would not be expected to adversely impact scenic vistas or the visual character of the area.

Mitigation Measures: The following mitigation measure will reduce impacts related to aesthetics to a less than significant level:

1. **AES1:** New structures shall be painted in colors similar to the existing Olam facility.

2. **AES2:** All lighting shall utilize downward shining shades in accordance with Colusa County Zoning Code Section 44-3.30.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. 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?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
c) Conflict with existing zoning for, or cause rezoning of, forestland (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))?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
d) Result in the loss of forestland or conversion of forestland to non-forest use?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
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 forestland to non-forest use?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Existing Setting:

The proposed Project site is currently the site of the Olam tomato processing facility and has a flat topography with concrete paving and compacted soil. The Project area has been used for tomato processing related activities and as a container storage area and has been previously disturbed by heavy-duty truck and trailer traffic over the years. The property is within an M-2 (Heavy Industrial) zone with an Industrial (I) land use designation.

The California Department of Conservation's Farmland Mapping and Monitoring Program has identified the Project site as Urban and Built-Up Land.[5] Land surrounding the facility is designated as Prime Farmland and Farmland of Statewide Importance with the exception of the Wadham Energy facility and an area designated as Other land to the west. The proposed Project site is not under a Williamson Act contract.

There are no forestry resources present in the Project area.

Impact Discussion:

a-c, e) The facility is not located on Prime Farmland or Farmland of Statewide Importance and is already disturbed by the previous industrial use. Therefore, the new facility would not affect agricultural land.

Interconnection with PG&E's existing electrical system could involve some pole replacement, but otherwise, no other offsite improvements are anticipated for the Project. Therefore, there would be no conversion of adjacent agricultural lands.

d,e) Feedstock for the facility would primarily comprise whole trees and trimmings from nearby orchards as a result of routine operations and maintenance activities associated with nearby agricultural operations. There is some potential for use of vegetation removed as a result of fuel management activities in the nearby conifer forests of the Sierra Nevada mountains, Mendocino County, other parts of northern California and southern Oregon. This material would otherwise be disposed of in landfills or burned onsite. Therefore, the Project would not increase the demand for forest products or require the purposeful clearing of forestland for the Project. Therefore, the Project would have no impact on forest resources.

Mitigation Measures:

- No mitigation required.

[5] Department of Conservation (DOC). 2021. California Important Farmland Finder. Farmland Mapping and Monitoring Program. https://maps.conservation.ca.gov/DLRP/CIFF/. May.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
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?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
c) Expose sensitive receptors to substantial pollutant concentration?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Existing Setting:

ECORP prepared an Emissions Assessment and Health Risk Assessment (HRA) for the Project which are contained in Appendix B. The Emissions Assessment report documents the results of an assessment of both air quality and greenhouse gas (GHG) emissions completed for the California Renewable Carbon Williams Facility Project (Project), which includes the construction and operation of the Project. Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of the assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment. The evaluation of impacts associated with GHG emissions is discussed in a separate section below. The HRA was prepared in accordance with the guidance from the Office of Environmental Health Hazard Assessment's (OEHHA's) *Guidance Manual for Preparation of Health Risk Assessments* to evaluate the potential health-related effects that Project toxic air contaminants (TACs) would have on residential receptors in the vicinity. Project TACs would include diesel particular matter (DPM) from the visiting haul trucks, and ammonia, formaldehyde, methanol, phenol, formic acid, and ethylene oxide from the proposed biocarbon product processing (Appendix B). Project emission calculations are contained in Appendix B for construction and operation of the Project.

Northern Sacramento Valley Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. Colusa County lies in the North Sacramento Valley Air Basin (NSVAB), which includes Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta

counties. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area (Appendix B).

The environmental conditions of Colusa County are conducive to potentially adverse air quality conditions. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are generally from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas.

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. The Colusa-Sunrise Boulevard (100 Sunrise Boulevard, Colusa, California) air quality monitoring station, located approximately 8.2 miles northeast of the Project site, is the closest station to the site. The Colusa-Sunrise Boulevard monitoring station monitors ambient concentrations of ozone (O_3) and concentrations of particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the development area (Appendix B).

The U.S. Environmental Protection Agency (USEPA) and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The Colusa County portion of the NSVAB is in nonattainment with the CAAQS for PM_{10}; otherwise, the County is in attainment or unclassified for the other criteria pollutants. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment; unclassified areas are typically treated as being in attainment (Appendix B).

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptor to the proposed production facility, where the greatest project

emissions would occur, is a residence located across Frontage Road approximately 150 feet west of the Project's western boundary. There is another residence, fronting Myers Road on the west side of I-5, located approximately 1,740 feet west of the production facility. The next-nearest residence sits approximately 2,150 feet east of the production facility on Myers Road. The nearest sensitive receptor to the north of the production facility includes a single-family residence located approximately 3,265 feet away.

Impact Discussion:

a-d) Implementation of the proposed Project could result in air quality impacts during construction and operations. The Colusa County Air Pollution Control District (CCAPCD) has not established air pollution emission thresholds under CEQA for the assessment of air quality impacts. As such, the proposed Project were compared to the significance threshold established by the Sacramento Metropolitan Air Quality Management District (SMAQMD).

Project Construction-Generated Criteria Air Quality Emissions

Construction-generated emissions are temporary and short term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants, including reactive organic gases (ROG), carbon monoxide (CO), nitrogen oxides (NO_X), PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, and NO_X emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project Site, emissions produced onsite as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

Construction-generated emissions associated with the proposed Project were calculated using CalEEMod. Predicted maximum daily construction-generated emissions of criteria air pollutants for the proposed Project are summarized in Table 2.

Table 2. Unmitigated Construction-Related Emissions

Construction Activity	Maximum Pollutants (lbs/day)		
	NO_x	PM_{10}	$PM_{2.5}$
Project Site Construction (year one)	102.78	14.15	7.44
Project Site Construction (year two)	89.63	13.99	7.13
Potentially Significant Impact Threshold	*85 lbs/day*	*80 lbs/day (If all feasible BACT/BMP applied)*	*82 lbs/day (If all feasible BACT/BMP applied)*

Table 2. Unmitigated Construction-Related Emissions

Construction Activity	Maximum Pollutants (lbs/day)		
	NO_x	PM_{10}	$PM_{2.5}$
Exceed Threshold?	**Yes**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A of Appendix B for Model Data Outputs.
Notes: Daily construction emissions taken from the season (summer or winter) with the highest output.
BACT Best Available Control Technology
BMP Best Management Practice
lbs/day pounds per day

As shown in Table 2, emissions of the O_3 precursor, NO_x, on the peak day(s) of construction would exceed the significance threshold during construction activities. Therefore, mitigation measure AQ1 is required in order to reduce NO_x emissions to levels below the regional significance threshold. Mitigation Measure AQ1 would mandate the use of cranes, excavators, and dozers with Tier 4 Certified engines during construction activities.

Table 3 shows Project construction emissions with imposition of Mitigation Measure AQ1.

Table 3. Mitigated Construction-Related Emissions

Construction Activity	Maximum Pollutants (lbs/day)		
	NO_x	PM_{10}	$PM_{2.5}$
Project Site Construction (year one)	77.14	8.59	4.22
Project Site Construction (year two)	67.90	8.63	4.09
Potentially Significant Impact Threshold	*85 lbs/day*	*80 lbs/day (If all feasible BACT/BMP applied)*	*82 lbs/day (If all feasible BACT/BMP applied)*
Exceed Threshold?	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A of Appendix B for Model Data Outputs.
Notes: Daily construction emissions taken from the season (summer or winter) with the highest output.
BACT Best Available Control Technology
BMP Best Management Practice
lbs/day pounds per day

As shown in Table 3, implementation of Mitigation Measure AQ1 would reduce NO_x emissions during construction activities to levels below the significance threshold. It is noted that the SMAQMD states that projects generating less than 80 pounds of PM_{10} and less than 82 pounds of $PM_{2.5}$ daily while also implementing SMAQMD's Basic Construction Emission Control Practices, known as Best Management Practices (BMPs) are considered less than significant. In addition to reducing NO_x emissions approximately 25 percent, adherence to Mitigation Measure AQ1 would reduce PM_{10} emissions by approximately 39 percent and $PM_{2.5}$ emissions by 42.9 percent compared with the unmitigated construction scenario. Therefore, implementation of Mitigation Measure AQ1 and its requirement that all Project cranes, excavators, and dozers be

equipped with Tier 4 Certified engines, in addition to reducing NO_x emissions below the significance threshold, is considered an adequate BMP to control PM emissions.

With implementation of Mitigation Measure AQ1, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur.

Project Operations Criteria Air Quality Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and sulfur dioxide (SO_2) as well as ozone precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with onsite stationary sources and motor vehicle use.

Long-terms operational emissions attributable to the Project are identified in Table 4 and compared to the operational significance thresholds promulgated by the SMAQMD.

Table 4. Operations-Related Emissions

Emission Source	Daily Emissions (lbs/day)					
	CO	NOx	SO2	VOC	PM10	PM2.5
Mobile Emissions						
Onsite Trucks (Idling)	1.28	1.05	0.00	0.09	0.0005	0.0005
Offsite Trucks	2.73	22.64	0.15	0.31	0.35	0.34
Trains	4.38	7.48	3.42	0.27	0.12	0.11
Employee Trips	4.22	0.65	0.01	0.39	1.24	0.33
Onsite Off-road Equipment	13.68	1.58	0.01	0.74	0.05	0.05
Stationary Emissions						
Material Handling	-	-	-	-	0.04	0.01
Screening/Ash Removal and Hammermills	-	-	-	-	5.76	0.29
Wet Biomass Storage	-	-	-	-	3.34	0.48
Biomass Heater Loading	-	-	-	-	5.39	0.54
Cogeneration Unit – Natural Gas	13.41	7.98	0.10	0.88	1.21	1.21
Cogeneration Unit – Process Gas	22.90	18.81	0.08	18.03	27.35	9.57
Pelletizer Stack	-	-	-	-	13.17	5.27
Process Gas Fugitive Emissions	-	-	-	10.62	-	-
Emergency Natural Gas Generator	1.46	3.90	0.00	0.54	0.05	0.05
Cooling Tower	-	-	-	30.24	12.61	4.41
Pellet Storage	-	-	-	-	5.76	0.29

Table 4. Operations-Related Emissions

Emission Source	Daily Emissions (lbs/day)					
	CO	NOx	SO2	VOC	PM10	PM2.5
Pellet Loading	-	-	-	-	1.93	0.29
Project Emissions Total	**64.06**	**64.09**	**3.77**	**62.11**	**78.37**	**23.23**
Potentially Significant Impact Threshold	*65 pounds/day*	*65 pounds/day*	*-*	*-*	*80 pounds/day*	*82 pounds/day*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A of Appendix B for Model Data Outputs.
lbs/day pounds per day

As shown in Table 4, daily Project emissions would not exceed any significance threshold during operations.

Conflict with an Applicable Air Quality Attainment Plan

The Clean Air Act (CAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. As previously stated, the Colusa County portion of the NSVAB, which encompasses the Project site, is classified attainment for all federal standards. As such, Colusa County is not subject to an air quality plan under the CAA.

The CCAPCD attains and maintains air quality conditions in Colusa County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. In an attempt to achieve and maintain air quality standards, the air district has participated in the preparation of air quality attainment plans and reports. Specifically, all of the air districts in the NSVAB including the CCAPCD, prepared an air quality attainment plan for O_3 in 1994. Updated every three years since adoption, the current *Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan* (2018 AQAP) includes forecast ROG and NO_x emissions (O_3 precursors) for the entire NSVAB through the year 2020. The 2018 AQAP provides local guidance for air basins to achieve and maintain attainment of the California O_3 standard. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, and updated emission inventory methodologies for various source categories.

The determination of AQAP consistency is primarily concerned with the long-term influence of a project on air quality. A project conforms with regional attainment plans if it complies with all applicable district rules and regulations and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). A project is nonconforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan.

Implementation of the Project would not surpass any of the applicable significance thresholds for individual pollutants, as show in Table 3 and 4 above, and therefore would not delay implementation of achieving attainment for all pollutants. Additionally, the Project is consistent with the growth forecasts used to inventory air pollutant emissions in the NSVAB. The growth

forecasts contained in the 2018 AQAP were defined in consultation with local governments and with reference to local general plans. The Project is consistent with the Colusa County General Plan land use designation for the site. Therefore, the Project would not increase population beyond that already considered and planned for in the unincorporated County.

The proposed Project would result in the conversion of orchard biomass to a biocarbon product using a non-combustion process involving thermal conversion of biomass (the biocarbon product would then be used in place of fossil fuels in energy and steel production). The majority of the biomass used for this process would be disposed of via open burning if not for the Project. Accounting for the emissions displaced from disposing orchard biomass through the Project process as opposed to disposing it via open burning would result in a net reduction in all criteria air pollutants. Emissions for open burning were calculated using the emission factors found in the CARB Emission Factor document (2006) found in academic research. Table 5 shows the emissions that would potentially be displaced by the proposed Project.

Table 5. Proposed Project Displaced Criteria Pollutant Emissions from Displaced Open Burning Emissions (Tons)

Emission Source	Displaced Emissions (tons)					
	ROG/VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Emissions Displaced Annually						
Displaced Open Burning Emissions	1,202	992	12,590	19	1,488	1,393

Source: ECORP 2021. Refer to Attachment A of Appendix B for Model Data Outputs.

Notes: Once operational, the Project would be able to process up to 763,000 gross wet tons of renewable biomass (feedstock) per year. For the purposes of this analysis, it is assumed that 50 percent of the redirected orchard biomass (381,500 tons) would be disposed of via open burning if not for the Project.

As shown in Table 5, Project conversion of orchard biomass to a biocarbon product would potentially displace up to 1,202 tons of ROG, 992 tons of NO_x, 1,488 tons of PM_{10}, and 1,393 tons of $PM_{2.5}$, annually (this equates to 7,174 pounds of ROG, 5,922 pounds of NO_x, 8,883 pounds of PM_{10}, and 8,313 pounds of $PM_{2.5}$, daily). Thus, the Project would result in a beneficial impact in terms of eliminating emissions that would otherwise be generated.

As previously described, the Project would use self-generated biogas for the process energy and would provide up to 10 MW of net electric power (17 MW gross) for export sale to PG&E. Thus, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact to statewide air quality. The energy produced by the Project would displace the criteria pollutant emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal).

Table 6 shows the emissions that would potentially be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-

combustion sources (wind, solar, nuclear, hydro-electric) (Appendix B). Displacement of fossil fuel emissions has a direct beneficial effect on human health for those receptors downwind of the location of the fossil fuel power plants.

Table 6. Proposed Project Displaced Criteria Pollutant Emissions from Onsite Electricity Generation (Tons)

Emission Source	Displaced Emissions (tons)					
	ROG/VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Emissions Displaced Annually						
Displaced Natural Gas-Source Emissions	0.0	0.4	0.1	0.3	0.4	0.2
Displaced Coal-Source Emissions	0.0	3.0	0.1	0.1	0.0	0.0
Total	**0.0**	**3.4**	**0.2**	**0.4**	**0.4**	**0.2**
Emissions Displaced over 30 Years (tons)						
Displaced Natural Gas-Source Emissions	0.0	12.0	4.8	8.7	12.0	4.8
Displaced Coal-Source Emissions	0.0	88.7	3.8	4.2	0.6	0.4
Total	**0.0**	**101.3**	**7.5**	**12.9**	**12.6**	**5.3**

Source: Refer to Attachment A of Appendix B for Model Data Outputs.

As shown, the Project would potentially displace just under 101.3 tons of NO_x, 7.5 tons of CO, 12.9 tons of SO_2, 12.6 tons of PM_{10}, and 5.3 tons of $PM_{2.5}$ over the course of 30 years.

As demonstrated in Table 3 and Table 4, the Project would not exceed the applicable significance thresholds for construction or operational-source emissions. Additionally, the Project is consistent with the growth forecasts used to inventory air pollutant emissions in the NSVAB. As shown in Table 5, Project conversion of orchard biomass to a biocarbon product would displace criteria air pollutants that would otherwise be emitted without the Project. Finally, as shown in Tables 5 and 6 the Project would potentially displace a substantial amount of pollutants due to disposing orchard biomass through the Project process as opposed to disposing it via open burning as well as the export sale of 10 MW of electricity. For these reasons, the Project would be consistent with the emission-reduction goals of the 2018 AQAP.

Exposure of Sensitive Receptors to TACs

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis The nearest sensitive receptor to the production facility, where the greatest Project emissions would occur, is a residence located across Frontage Road approximately 150 feet west of the Project's western boundary. There is another residence, fronting Myers Road on the west side of I-5, located approximately 1,740 feet west of the production facility. The next-nearest residence sits approximately 2,150 feet east of the production facility on Myers Road. The nearest sensitive

receptor to the north of the production facility includes a single-family residence located approximately 3,265 feet away.

Construction-Generated Air Contaminants

Construction of the Project would result in temporary, short-term Project-generated emissions of DPM, ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for Project site preparation and construction. As previously identified, the portion of the NSVAB which encompasses the Project area is designated as a nonattainment area for state standards for PM_{10}. Thus, existing PM_{10} levels in the Colusa County portion of the NSVAB are at unhealthy levels during certain periods. However, as shown in Table 3, the Project would not exceed the applicable significance thresholds for construction emissions with the imposition of Mitigation Measure AQ1.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the significance thresholds, with the imposition of Mitigation Measure AQ1, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction-type activity, DPM is the primary TAC of concern. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{10}, considered a surrogate for DPM and includes emissions of exhaust $PM_{2.5}$, would be 1.82 pounds per day for construction activities associated with the proposed Project (see Attachment A of Appendix B). PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} at levels that would exceed the applicable thresholds with imposition of Mitigation Measure AQ1, nor would it generate any significant emissions of $PM_{2.5}$. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the proposed Project would result in the development of substantial sources of the air toxins, DPM, ammonia, formaldehyde, methanol, phenol, formic acid, and ethylene oxide. An operational HRA has been prepared for this Project (Appendix B). The following discussion is based on this HRA.

Cancer Risk

Cancer risk calculations for existing residential receptors are based on a 70-year exposure periods to for operations. The calculated cancer risk accounts for 350 days per year of exposure to existing residential receptors. While the average American spends 87 percent of their life indoors (Appendix B), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead health risk calculations account for the equivalent exposure of continual outdoor living. The calculated carcinogenic risk at Project vicinity receptors is depicted in Table 7.

Table 7. Cancer Risk Summary at Maximum Point of Exposure at Maximumly Exposed Receptors (Residence to West)

Exposure Scenario	Total Risk (Cases per One Million)
Project Operations	
70-Year Exposure Residence	**9.21**
25-Year Exposure Worker	**1.06**
Potentially Significant Impact Threshold	*10*
Exceed Threshold?	**No**

Source: Refer to Attachment A of Appendix B for Model Data Outputs.

As shown, impacts related to cancer risk for all modeled scenarios would be below the 10 in one million threshold for Project operations.

Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the reference exposure level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. As mentioned above no acute risk was analyzed for this report as DPM has no identified acute risk.

A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the REL. The highest maximum chronic hazard indexes for sensitive receptors as a result of Project operations as a result of TAC exposure is shown in Table 8.

Table 8. Non-Carcinogenic Health Risk Summary at Maximumly Exposed Receptors (Residence to West)

Exposure Scenario	**Maximum Acute Hazard**	**Maximum Chronic Hazard**
Residential Receptor	**0.074**	**0.005**
Potentially Significant Impact Threshold	*1*	*1*
Exceed Threshold?	**No**	**No**

Source: Refer to Attachment A of Appendix B for Model Data Outputs.

As shown in Table 8, impacts related to non-cancer risk (chronic hazard index) as a result of the Project site would not surpass significance thresholds.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the NSVAB is designated unclassified for the state and federal standards. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 Air Quality Management Plan can be used to demonstrate the potential for CO exceedances of these standards (Appendix B). The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue

(Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (Appendix B). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other air districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The proposed Project is anticipated to result in an average of 325 weekday traffic trips. Thus, the Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

Odors

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

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection

threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would result in a less than significant impact related to odor emissions.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any of these uses.

As previously described, the ability to detect odors varies considerably among the population and is inherently subjective in nature. For instance, Project operations could be considered a source of unpleasant odors by some given its proposed as a manufacturing facility. However, the proposed Project would also be required to comply with CCAPCD Rule 200 to prevent occurrences of public nuisances. Rule 402 prohibits the discharge from any source that causes nuisance, annoyance, or discomfort to a considerable number of persons. As a result, the Project is expected to result in a less than significant impact associated with odors.

Mitigation Measures: The following mitigation measure will reduce impacts related to air quality to a less than significant level:

3. **AQ1**: Prior to issuance of a grading permit, the Project applicant shall submit a list of all Project cranes, excavators, and dozers that would be used during construction activities and shall document that said equipment is California Air Resources Board (CARB) Tier 4 Certified, as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
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?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
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?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Existing Setting:

A Biological Resources Assessment was completed by ECORP Consulting Inc. for the Project to collect information on the biological resources present and evaluate the potential for special-status species and their habitats to occur in the Study Area; assess the potential for sensitive habitats such as wetlands or waters of the United States or State to occur in the Study area; assess potential biological impacts related to Project activities; and identify required avoidance, minimization, or mitigation measures (Appendix C).

The Study Area consisted of the approximately 49-acre former Olam Tomato Facility and the route for potential upgrades to approximately four miles of PG&E's Williams 1101 12 kV distribution line or Wadham 60 kV power line co-located on the same set of power poles that run from the Olam facility to the PG&E Williams Generating Station in the City of Williams. The analysis of the Study Area included the impact limits of the Project (Project Area) plus a 200-foot buffer around the facility and utility easement (buffers collectively referred to as the Buffer Area). All components of the Study Area (Project Area plus Buffer Area) are depicted on Figures 1 and 2 of Appendix C.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of CEQA Guidelines;
- are identified as a Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as Birds of Conservation Concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);

- are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1 and 2), plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA; California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for this assessment. Other species without special status that are sometimes found in database or literature searches were not included in this analysis. Finally, impacts on birds protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code were also evaluated (see Appendix C).

A literature search and field reconnaissance in the Study Area was performed to determine the special-status species that have been documented within or in the vicinity of the Study Area. Details are contained in Appendix C. A follow-up survey was conducted by ECORP biologists to map elderberry shrubs and to conduct a presence/absence survey for Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*; VELB), a federally threatened species. In addition, all potential wetlands and/or waters of the United States or State were mapped within the Study Area (Appendix C).

Two federally listed species (VELB and giant garter snake) and three State-listed species (VELB, Swainson's hawk, and tricolored blackbird), have potential to occur within the Study Area based on the habitats present in the Study Area. In addition, there is potential for 21 non-listed special-status species and various birds protected under the federal MBTA and the California Fish and Game Code to occur. Aquatic resources, ditches, are located within the Study Area and may be considered Waters of the U.S. or State.

Impact Discussion:

a) No special-status species are known to occur within the Study Area. However, the Study Area includes potential habitat for several special-status species. Potential effects to special-status species are summarized in the following sections.

Special-Status Plants

There is no potential for federally and State-listed plant species to occur within the Study Area. However, there is low potential for nine non-listed, special-status plant species to occur (see Table 1 in Appendix C). Project development may permanently remove or alter a minimal amount of marginally suitable habitat for special-status plants, and in the unlikely chance that special-status plant populations occur onsite they may be directly or indirectly removed by Project construction.

Implementation of mitigation measures BIO1 through BIO4, PLANT1, and PLANT2 would avoid and/or minimize potential effects on special-status plants. These include a preconstruction

plant survey, avoidance measures if necessary, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact special-status plants.

Special-Status Invertebrates

Although four federally listed invertebrate species were initially returned in the literature review, only VELB (a federally threatened species) has potential to occur within the Study Area. Numerous blue elderberry shrubs, essential habitat for this species, were documented along the electrical line route within 30 feet of power poles. No sign of VELB was noted during a dedicated survey. However, elderberry shrubs are considered essential habitat for VELB and are therefore protected from take.

Implementation of mitigation measures BIO1 through BIO4, PLANT1, and PLANT2, and VELB1 through VELB4 would ensure avoidance of potential effects on elderberry shrubs and VELB. These include a preconstruction survey, avoidance measures, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact VELB or its habitat.

Special-Status Amphibians

There is potential for western spadefoot, a CDFW SSC, to occur in the Study Area. Potential Project-related impacts are described below for this species.

Western Spadefoot

A small amount of very degraded upland habitat for western spadefoot within the footprint of the former Olam Tomato facility and along the electrical line upgrade may be temporarily altered through construction activities. The highly compacted soils within the facility and the roadside powerline alignment are unlikely to harbor adult spadefoots, and no breeding habitat is present in the work areas. Potential breeding habitat may be present in adjacent ditches in the Buffer Area. However, removal or alteration of a small amount of upland habitat during construction is not expected to significantly impact the species.

Implementation of mitigation measures BIO1 through BIO4, and SPADE1 would avoid and/or minimize potential effects on spadefoots. These include a preconstruction western spadefoot survey, avoidance measures if necessary, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact western spadefoot.

Special-Status Reptiles

There is low potential for northwestern pond turtle, a CDFW SSC, to occur in the Survey Area. Additionally, giant garter snake, a federally and State-listed species, has low potential to occur in the Study Area. Potential impacts are described for both species in the following sections.

Northwestern Pond Turtle

It is exceedingly unlikely that northwestern pond turtles occur within upland habitat along the electrical line upgrade route except where the line runs east-west along Husted Lateral. There, a small amount of potential upland habitat may be temporarily altered, and turtles might be displaced from upland habitats. Alteration of a small amount of upland habitat on roadside edges is not expected to impact the species.

Implementation of mitigation measures BIO1 through BIO4, and NPT1 would avoid and/or minimize potential effects on northwestern pond turtles. These include a preconstruction northwestern pond turtle survey, avoidance measures if necessary, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact northwestern pond turtle.

Giant Garter Snake

Giant garter snakes may utilize aquatic resources (i.e., ditches and rice fields) adjacent to the Study Area and upland habitats within 200 feet of potential aquatic resources. No permanent impacts to upland habitat would occur. Temporary impacts to potential upland habitat would occur within the electrical line upgrade area and the decommissioned Olam Tomato Processing Plant, which are located within 200 feet of ditches east or north of the Study Area (see Figure 1 of Appendix C). Temporary impacts to small amounts of upland habitat on roadsides are not expected to affect individuals or the persistence of populations.

Implementation of mitigation measures BIO1 through BIO4, and GGS1 through GGS5 would avoid and/or minimize potential effects to giant garter snake. These include a preconstruction wildlife survey, exclusion fencing, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact giant garter snake.

Special-Status and Migratory Bird Treaty Act-Protected Birds

There is no potential nesting or foraging habitat for federally listed bird species in the Survey Area. However, two State-listed bird species (Swainson's hawk and tricolored blackbird) have low potential to nest and forage within the Study Area. Swainson's hawk and tricolored blackbird may also nest in adjacent habitats. There is potential nesting and/or foraging habitat for eight non-listed special-status bird species and one fully protected species (white-tailed kite) within the Study Area (see Table 1 in Appendix C). Additionally, a variety of other birds that are protected under the MBTA and the California Fish and Game Code may nest within or adjacent to the Study Area. During reconnaissance-level surveys, numerous human commensal species (red-winged blackbird, European starling, Eurasian collared dove, mourning dove) were noted nesting in industrial equipment within the Olam Facility.

The Project may temporarily alter a minimal amount of potential foraging or nesting habitat for these species during construction. However, very little vegetation would be removed during the implementation of the Project and may be limited to trimming or pruning of limbs on trees adjacent to electrical poles. Removal or alteration of a small amount of habitat and temporary displacement of foraging birds during construction is not expected to adversely impact these

species. Due to the small footprint of the electrical line upgrades and the short duration of the Project, disturbance to wintering birds during construction and mortality of birds is not expected.

Implementation of mitigation measures BIO1 through BIO4, and BIRD1 described below would avoid or minimize potential effects to special-status birds and other protected birds. These include a preconstruction nesting-bird survey, avoidance measures if necessary, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact special-status and MBTA-protected birds.

Special-Status Mammals

No federally or State-listed mammals have potential to occur in the Study Area. However, there is potential or low potential for three CDFW SSC species (Townsend's big-eared bat, western red bat, and American badger) to roost (bats) or forage within the Study Area. No impacts to bats are expected because no trees or warehouse buildings would be removed.

A small amount of potential foraging habitat for American badger may be temporarily altered, and in the very unlikely event that American badgers forage within the Study Area they may be temporarily displaced. Removal or alteration of a small amount of foraging habitat and temporary displacement of American badgers during construction is not expected to significantly impact this species.

Implementation of mitigation measures BIO1 through BIO4, and MAM1 would avoid and/or minimize potential effects to American badger. These include a preconstruction badger survey, avoidance measures if necessary, worker awareness environmental training, and measures to avoid offsite impacts. With implementation of these measures, the Project is not expected to significantly impact American badger.

b,c) Based on the preliminary aquatic resources assessment and the current Project limits, the Project would have no impact on federally protected wetlands. Ditches within the Study Area may be considered Waters of the U.S. or State. However, no impacts to any ditches would be necessary for the Project. Implementation of mitigation measures BIO1 through BIO4, WATER1, and WATER2 described below would avoid, minimize, or compensate for potential effects to Waters of the U.S. or State. Therefore, impacts would be less than significant with implementation of these measures.

d) There are no documented nursery sites and no nursey sites were observed within the Study Area during the site reconnaissance. Therefore, the Project is not expected to impact wildlife nursery sites.

Project construction may temporarily disturb and displace wildlife from the Study Area. Some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume and would likely be similar to those before project implementation in the Study Area. The Project is not expected to substantially interfere with wildlife movement. Therefore, impacts would be less than significant.

e) The Project is within Colusa County. The only known local policies relevant to the Project are outlined in the County General Plan and Final EIR[6,7]. The Project is not expected to conflict with goals and objectives outlined within the Plan with implementation of the mitigation measures below. Therefore, impacts would be less than significant with implementation of these measures.

f) The Study Area is not covered by any local, regional, or State conservation plan. Therefore, the Project would not conflict with a local, regional, or State conservation plan.

Mitigation Measures: The mitigation measures below will reduce impacts related to biological resources to a less than significant level:

5. **BIO1:** In areas of ground disturbance, the Project impact limits shall be clearly demarcated prior to construction and all workers shall be made aware of the impact limits and avoided areas. If orange construction fencing is to be used, it shall be placed such that there is a 1-foot gap between the ground and the bottom of the fencing to prevent snakes and other ground-dwelling animals from being caught in the fencing. No work shall occur outside of the Project impact limits. All vehicles and equipment shall be restricted to the Project impact limits and/or existing designated access roads and staging areas. Project-related vehicles shall observe a speed limit of 15 miles per hour in construction areas and on access roads where it is safe and feasible to do so, except on County roads and State and federal highways. Extra caution shall be used on cool days when giant garter snakes may be basking on roads.

6. **BIO2:** Erosion control measures shall be placed between avoided aquatic resources and the outer edge of the impact limits prior to commencement of construction activities and shall be maintained until construction is completed and soils have been stabilized. Plastic monofilament netting or similar material shall not be used for erosion control, because smaller wildlife may become entangled or trapped in it. Also excluded are products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers or tackified hydroseeding compounds.

7. **BIO3:** Any fueling in the Study Area during construction shall use appropriate secondary containment techniques to prevent spills and shall occur away from potential aquatic resources.

8. **BIO4:** A qualified biologist shall conduct a mandatory worker environmental awareness training for all contractors, work crews, and any onsite personnel to aid workers in recognizing special-status species and sensitive biological resources that may occur onsite. The program shall include identification of the special-status species and their habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction, environmentally sensitive areas, and measures required to reduce impacts to biological resources. The Project shall retain a qualified biologist on an as-needed basis to assist with potential biological issues that may arise during construction (i.e., avoidance of elderberry shrubs, wildlife relocation).

[6] Colusa County. 2012a. General Plan.
[7] Colusa County. 2012b. Final Environmental Impact Report for the General Plan.

8. **PLANT1:** A qualified biologist shall perform floristic plant surveys according to U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS) protocols within impact areas prior to construction. Surveys shall be conducted by a qualified biologist and timed according to the appropriate phenological stage for identifying target species. Known reference populations shall be visited and/or local herbaria records shall be reviewed, if available, prior to surveys to confirm the phenological stage of the target species. If no special-status plants are found within the Project site, no further measures pertaining to special-status plants are necessary.

9. **PLANT2:** If special-status plants are identified within 25 feet of an impact area, implement the following measures:

- If avoidance of special-status plants is feasible, establish and clearly demarcate avoidance zones for special-status plant occurrences prior to construction and designate as environmentally sensitive areas. Avoidance zones shall include the extent of the special-status plants plus a 25-foot buffer, unless otherwise determined by a qualified biologist, and shall be maintained until the completion of construction. A qualified biologist or biological monitor shall be present if work must occur within the avoidance buffer to ensure special-status plants are not impacted by the work.
- If avoidance of special-status plants is not feasible, mitigation for significant impacts to special-status plants will be required. Mitigation measures shall be developed in consultation with CDFW. Mitigation measures may include restoration or permanent preservation of onsite or offsite habitat for special-status plants and/or translocation of plants or seeds from impacted areas to unaffected habitats.

10. **VELB1:** A qualified biologist shall establish an avoidance area around each elderberry shrub. The avoidance area shall encircle the elderberry shrub and have a diameter equal to the widest radius of the dripline (the area of soil and roots located directly under the outer circumference of the shrub's branches) plus 20 feet. The avoidance area shall be demarcated with high-visibility materials (e.g., high-visibility pin flags and/or flagging) prior to construction, where possible, and markers shall be maintained until the completion of all work activities occurring within 30 feet of the avoidance area (i.e., 50 feet from the dripline).

11. **VELB2:** A qualified biologist shall provide worker awareness training for all Project personnel that will work within 30 feet of the elderberry avoidance area on the status of Valley elderberry longhorn beetle (VELB), its host plant and habitat, the need to avoid damaging elderberry shrubs, and the possible penalties for non-compliance prior to the start of work within 30 feet of the elderberry avoidance area.

12. **VELB3:** Dust generation should be minimized by applying water during ground disturbing construction activities or by presoaking work areas for all work within 30 feet of the elderberry.

13. **VELB4:** If feasible, no ground- or vegetation-disturbing activities shall take place within the elderberry avoidance area. If ground- or vegetation-disturbing activities must occur within the avoidance area, the following measures are required:

No trimming or removal of elderberry shall occur. If removal of branches greater or equal to 1 inch in diameter or ground-disturbing activities that may impact the elderberry must occur, consultation with the USFWS is required to determine if the Project will require incidental take authorization through a Section 7 consultation or a Section 10(a)(1)(B) permit. Preparation of a Biological Assessment (BA) or a mitigation and monitoring plan may be required. Mitigation may include transplanting of the elderberry as per current USFWS Guidelines (USFWS 2017), purchase of credits at a USFWS-approved bank, and/or establishment or protection of VELB habitat.

14. **SPADE1:** A qualified biologist shall conduct a pre-construction survey in the Project Area (including impact areas and staging areas) within 48 hours prior to construction activities. Any Western spadefoots discovered in the Project Area immediately prior to or during Project activities shall be kept out of harm's way and allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat.

15. **NPT1:** A qualified biologist shall conduct a pre-construction northwestern pond turtle survey in the Project Area and adjacent ditches within 48 hours prior to construction activities. Any northwestern pond turtles discovered in the Project Area immediately prior to or during Project activities shall be kept out of harm's way and allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat.

16. **GGS1:** Avoid construction activities within 200 feet from the banks of giant garter snake aquatic habitat, where feasible. Avoided giant garter snake habitat within or adjacent to the Project shall be designated by a qualified biologist as environmentally sensitive areas as described in Mitigation Measure GGS4 and avoided by all construction personnel. Confine clearing to the minimum area necessary to facilitate construction activities. Confine staging and movement of heavy equipment outside of work areas to existing roadways or staging areas to minimize habitat disturbance.

17. **GGS2:** All construction activity within 200 feet of giant garter snake aquatic habitat shall be conducted during the giant garter snake's active period (between May 1 and October 1). During this timeframe, potential for injury and mortality are lessened because snakes are expected to actively move and avoid danger. Giant garter snakes are more vulnerable to danger during their inactive period because they are occupying underground burrows or crevices and are more susceptible to direct impacts, especially during excavation.

18. **GGS3:** Within 24-hours prior to construction activities, a qualified biologist shall survey the Project Area (including impacts areas, access roads, and staging areas) for giant garter snakes. Surveys shall be repeated if a lapse in construction activity of 2 weeks or greater has occurred.

19. **GGS4:** Exclusion fencing shall be installed along the edge of ground disturbances that are within 200 feet of aquatic habitat and fencing shall be maintained for the duration of construction. The exclusion fencing shall be installed during the active period for giant garter snakes (May 1 to October 1). The exclusion fencing shall consist of 3-foot-tall silt fencing buried 4 to 6 inches below ground level. Fencing requirements shall be included in the construction specifications. A qualified biological monitor shall be onsite during exclusion fence installation and initial clearing and grubbing activities. Prior to construction activities each morning, exclusion fencing shall be inspected to ensure it is functional by a biological monitor or by construction personnel that have been trained by a qualified biologist. If any giant garter snakes are observed in the construction area during this inspection or at any other time during construction, construction personnel shall contact a qualified biologist and all Project activities shall cease until the snake has moved out of the Project Area of its own volition or has been relocated by a permitted biologist. Giant garter snake sightings and incidental take shall be reported to the USFWS immediately by telephone at (916) 414-6600. If the installation of exclusion fencing is not feasible, a qualified biological monitor shall be present during all construction activities within 200 feet of aquatic habitat.

20. **GGS5:** After completion of construction activities, remove any construction debris and, where feasible, restore disturbed areas to pre-Project conditions.

21. **BIRD1:** If construction is to occur during the nesting season (generally February 1 to August 31), a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable nesting habitat within 14 days prior to construction. The survey shall be conducted within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. If any active nests are observed, these nests shall be designated an environmentally sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

22. **MAM1:** A qualified biologist shall conduct a pre-construction survey for American badger in the Project Area (including impacts areas, access roads, and staging areas) within 48 hours prior to construction activities. If any American badgers are discovered in or near the Project Area immediately prior to or during Project activities, a qualified biologist shall have authority to halt Project activity that may harm badgers, and badgers shall be allowed to move out of the work area of their own volition. If an active badger den is detected within or near the work area, it shall be designated an environmentally sensitive area and protected by an avoidance buffer established in coordination with CDFW. The buffer shall be maintained until a qualified biologist determines the den is no longer active. Dens that are determined to be inactive by the qualified biologist shall be collapsed by hand to prevent occupation of the burrow between the time of the survey and construction activities.

23. **WATER1:** Where feasible, ground disturbance shall not occur within an avoidance buffer maintained from the top of the bank or furthest outside edge of aquatic resources of a ditch, whichever is more protective. The avoidance buffer shall include a minimum distance of 50 feet from the top of a bank or furthest outside edge of an aquatic resource and shall be delineated by

a qualified biologist using exclusion fencing or stakes/flagging prior to the initiation of construction.

24. **WATER2:** If impacts to aquatic resources cannot feasibly be avoided, the following measures shall apply:

- Prepare and submit an aquatic resources delineation for the Project to the U.S. Army Corps of Engineers (USACE) and obtain an Approved Jurisdictional Determination.
- If necessary, file a request for authorization to fill wetlands and other Waters of the U.S. under Section 404 of the federal Clean Water Act (CWA) (Section 404 Permit) prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures shall be developed as part of the Section 404 Permit process to ensure no net loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Nationwide Permit for the Project shall be prepared and submitted to USACE. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however, final mitigation requirements will be developed in consultation with USACE.
- If necessary, file a request for a Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the Regional Water Quality Control Board (RWQCB) for Section 404 permit actions.
- Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State within the Project site will be developed in consultation with the RWQCB.
- If necessary, prepare a Lake and Streambed Alteration (LSA) Notification to CDFW under California Fish and Game Code Section 1602 to request authorization to impact regulated aquatic features.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	**[ ]**	**[x]**	**[ ]**	**[ ]**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	**[ ]**	**[x]**	**[ ]**	**[ ]**

c) Disturb any human remains, including those interred outside of formal cemeteries?	**[ ]**	**[ ]**	**[ ]**	**[x]**

Existing Setting:

In June 2021, ECORP prepared a Cultural Resource Inventory and Evaluation Report for the Project.[8] ECORP requested a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University-Rohnert Park on May 7, 2021 to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the Proposed Project Area of Potential Effect (APE), and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Colusa County, the following historic references were also reviewed (ECORP 2021): Historic Property Data File for Colusa County; the National Register Information System; California Historical Landmarks; California Historical Landmarks; California Points of Historical Interest; Directory of Properties in the Historical Resources Inventory (1999); Caltrans Local Bridge Survey; Caltrans State Bridge Survey; and *Historic Spots in California*.

Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records, historic maps, and historic aerial photographs. Historic aerial photographs taken in 1937, 1964, and 1971, as well as more recent aerials from 1983, 1998, 2005, 2009, 2010, 2012, 2014, and 2016 were also reviewed for any indications of property usage and built environment.

ECORP mailed letters to the Sacramento Valley Museum on May 14, 2021 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area. No responses to the letters sent to the Sacramento Valley Museum have been received to date.

Three previous cultural resource investigations were conducted within 0.5 mile of the property, covering approximately 15 percent of the total area surrounding the property within the record search radius (Table 9). The previous studies were conducted between 2000 and 2012 and vary in size.

[8] ECORP Consulting, Inc. (ECORP). 2021. Cultural Resources Inventory and Architectural History Evaluation Report, California Renewable Carbon Williams Production Facility. Prepared for California Renewable Carbon. June.

Table 9. Previous Cultural Studies in or Within 0.5 Mile of the Project Area				
Report Number	**Author(s)**	**Report Title**	**Year**	**Includes Portion of the Project Area?**
S-22736	Jones & Stokes Associates, Inc	Final Cultural Resources Inventory Report for Williams Communications, Inc., Fiber Optic Cable System Installation Project, Point Arena to Robbins and Point Arena to Sacramento, California: Volumes I - III	2000	Yes
S-043845	Beatrice Cox	Cultural Resources Inventory Report for the Cortina #3 60kV Transmission Line Pole Replacement Project, Colusa County, California	2011	No
S-043845a	Nancy Arcady Haley	COE120117A: Transmission Line Maintenance for 7 Existing Wooden Transmission Poles	2012	No

The results of the records search indicate that approximately 40 percent of the property was previously surveyed for cultural resources; however, these studies were conducted in smaller segments, at different times, by different consultants, as many as 21 years ago under obsolete standards. Therefore, a pedestrian survey of the APE was conducted for the current Project under current protocols.

The records search determined that one previously recorded historic-era cultural resource is located within 0.5 mile of the Project Area: a segment of the Southern Pacific Railroad (SPRR) (now the Union Pacific Railroad) (P-06-000586). However, this resource is not located within the Project Area; rather, it parallels portions of it.

The OHP's Directory of Properties, Historic Property Data File (dated April 5, 2012) did not include any resources within 0.5 mile of the Project Area.

The OHP's Built Environment Resource Directory (BERD) for Colusa County (dated March 3, 2020) listed 15 resources within 0.5 mile of the Project Area. However, the only resource listed in the BERD that crosses the Project Area is the Glenn-Colusa Canal, built between1924 and 1929. The canal was determined not eligible for the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR) in 2015.

The National Register Information System failed to reveal any eligible or listed properties within the Project Area. The nearest National Register properties are located 10 miles northeast of the Project Area in Colusa.

Resources listed as *California Historical Landmarks* (OHP 1996) and by the OHP were reviewed on May 14, 2021. The nearest listed landmark is #890: the Colusa County Courthouse in California (plaque located approximately 10 miles northeast of the Project Area).

A review of *Historic Spots in California* mentions that the City of Williams was historically part of over 7,000 acres owned by W.H. Williams, an early Colusa County entrepreneur. Williams established the town, originally called Central, in partnership with the SPRR and former residents of the city of Colusa; the town was later named for him. The distribution and power lines within the northern portion of the Project Area are situated within Mr. Williams' historic-period land holdings.

In summary, the Project Area, located in the Williams vicinity, has been used largely as transportation routes for roads and a railway, and later, portions of it were developed for power distribution and commercial agriculture processing. The area surrounding the Olam Tomato Processing Facility was largely agricultural crop land until the facility was constructed in the 1980s. Historic-era Glenn-Colusa Canal crosses underneath electrical line proposed for upgrades; however, Project activities would have no potential to affect the canal.

On May 18, 2021, ECORP performed an intensive pedestrian survey of the APE under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* using transects spaced 15 meters apart within the Proposed Project facility, and examination of the remainder of the Project Area at regular intervals. ECORP expended two person-days in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

The southern portion of the Olam Tomato Processing Facility parcel was largely paved over and contains several buildings; this area was photographed, and the remaining areas of exposed ground surface were examined for cultural material. The northern portion of the Olam parcel had greater exposed ground surface and was transected intensively. The parcel was heavily disturbed, with some graveled areas and a large equipment staging area. Patchy invasive grasses covered up to 40 percent of the surface, and gravel covered approximately 15 percent; visibility was fair to poor; the remainder of the parcel was paved or had buildings. No cultural material or soils were observed.

The historic-period PG&E Williams 1101 12 kV distribution line (NCT-01) was observed on the western side of the Olam parcel, and was mapped and photographed. The Williams 1101 12 kV distribution line was also recorded using Department of Parks and Recreation (DPR) 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld Global Positioning System receiver, and sketched as necessary to document their presence using appropriate DPR forms.

Resource NCT-01 extends throughout the rest of the Project Area and was documented at regular intervals, particularly at line junctions and ends. The condition, number, and ground surface conditions of a sample of poles were examined and photographed. Overview photos of the

nearby pole span were also taken to document overall setting and condition of the distribution line. Resource NCT-01 is a segment of the historic-period Williams 1101 12 kV distribution line dating to approximately 1957, with portions dating to as early as 1937 (based on historical aerial photograph review). This segment of distribution line is owned by PG&E, measures approximately 5 miles in total length, and extends between the PG&E Williams Generating Station and the former Olam Tomato Processing Facility. From the PG&E Williams Generating Station on its northwestern end, NCT-01 follows Fifth Street 0.65 mile southeast to Theater Road where it bends eastward for 0.55 mile, crossing I-5 and paralleling Husted Lateral Road. At the intersection of Husted Lateral Road and Husted Road, NCT-01 follows Husted Road southward for 1.12 miles. At the intersection of Husted Road and Frontage Road, this segment of the line bends southeastward along Frontage Road for approximately 2.2 miles until it reaches the former Olam Tomato Processing facility at Myers Road. Here a short spur of NCT-01 measuring approximately 0.25 mile extends eastward along the northern parcel boundary and connects to a substation. Another spur, approximately 1,000 feet long, crosses Frontage Road at the southern end of NCT-01 to the southwestern Olam parcel corner, entering the parcel and paralleling the parcel boundary until its terminus near the main Olam facility building.

NCT-01 is a typical wood pole line with standard cross arms and porcelain insulators.

Archival research conducted for this project indicates that the electric Williams 1101 12 kV distribution line (NCT-01) is not significantly associated with the initial development of electric distribution and transmission across California, but instead acts as an expansion to existing electric distribution systems already in place. The expansion served as a way of sustaining growing population and agricultural industry in the Williams vicinity, but it did not serve to increase the population or economic strength of the area. Additionally, the distribution line represents one of many electric distribution and transmission line systems in California that were built well after the initial period of the development of electric transmission systems, which was between 1890 and 1920. The distribution line is not related to the broad patterns of history associated with the development of electric transmission systems in the U.S. or California, or as part of the historical developments of PG&E. Therefore, it is not eligible under NRHP Criterion A or CRHR Criterion 1.

Similarly, focused archival research did not identify a specific individual or group of significance associated with the distribution line. The distribution line, therefore, is not eligible under NRHP Criterion B or CRHR Criterion 2.

The materials and components of the distribution line are of typical design and construction purposed to effectively transmit electricity, and they do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values. Any number of engineers and designers may have collaborated on the construction of the distribution line. It does not appear that construction of the distribution line is associated with any individuals important to the development and construction of electric distribution and transmission systems in the U.S. or California or PG&E. The line segment and its components were designed to fit the particular requirements of their specific location along the distribution line systems and included engineering considerations such as environmental setting and costs. The design, construction techniques, and equipment (e.g., conductors, guy wires, and insulators) used for construction and operation of the distribution line were in existence and operation throughout California and the

U.S. for many years prior to the construction of the distribution lines. The components used for each of the poles are standard construction. The distribution line and its poles and components are designed to efficiently transmit electricity, but do not include any unique features which exemplify that purpose. They are common and utilitarian, and represent standard design, engineering, and construction associated with distribution lines. None of the poles, insulators, or other components of the distribution line are the best representatives or examples of a particular type of design or construction. The distribution line, therefore, is not eligible under NRHP Criterion C or CRHR Criterion 3.

Associations aside, the only potential for historic distribution lines to yield information is through its location and alignment; however, this information does not rise to the level of importance required to become eligible for the NRHP or CRHR. Moreover, the archival research, field observations, and recording of this resource on DPR records have exhausted the data potential for the distribution line. Additional research would not likely provide any significantly new information regarding the resource. Therefore, NCT-01 (Williams 1101 12 kV) is not eligible under NRHP Criterion D or CRHR Criterion 4.

Finally, in addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) on May 7, 2021 to request a search of the Sacred Lands File for the APE. This search will determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File, ECORP solicited information from the Native American community regarding tribal cultural resources, but the responsibility to formally consult with the Native American community lies exclusively with the federal and local agencies under applicable state and federal law. The NAHC returned the results of the search of the Sacred Lands File on May 25, 2021. The search results were negative, meaning that a search of the Sacred Land File did not reveal the presence of known Native American Sacred Sites in the Project Area.

Impact Discussion:

a-c) One cultural resource was identified in the Project Area as a result of the inventory: NCT-01, a segment of a historic-period distribution line. This resource was evaluated for eligibility to the NRHP and CRHR using archival research and was found not eligible. Therefore, it is not considered a Historical Resource as defined by CEQA.

Due to the presence of Holocene alluvium along perennial waterways near the Project Area and given the likelihood of pre-contact archaeological sites located along perennial waterways (i.e. the area near the former alignment of Old Cortina Creek), there exists the potential for buried pre-contact archaeological sites in the Project Area. In addition, the potential always remains for ground-disturbing activities to expose previously unrecorded cultural resources. CEQA requires the lead agency to address any unanticipated cultural resource discoveries during Project construction. Without mitigation, impacts would be potential significant. However, with implementation of mitigation measure CUL1 below, which establishes procedures to be followed if cultural resources are inadvertently discovered, impacts would be reduced to less than significant levels.

Mitigation Measures: The following mitigation measures will reduce impacts related to cultural resources to a less than significant level:

25. **CUL1:** If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for pre-contact and historic archaeologist, shall evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, they shall immediately notify the lead federal agency, the lead CEQA agencies, which the agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Colusa County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code (PRC), and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through

consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

VI. ENERGY – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operations?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Existing Setting:

An Energy Impact Assessment was completed for the Project by ECORP Consulting Inc. which is contained in Appendix D. This report was prepared to analyze the potential direct and indirect environmental impacts associated with the Project energy consumption, including the depletion of nonrenewable resources (oil, natural gas, coal, etc.) during the construction and operational phases. The impact analysis focuses on the four sources of energy that are relevant to the proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations.

Impact Discussion:

a-b) Impacts associated with energy consumption as well as plans and policies for energy efficiency are discussed below.

Energy Consumption

While the proposed facility would consume electricity, biogas from the process would be used in a new cogeneration system for the generation of electricity. According to the Project engineer, the process would provide up to 10 MW of net electric power (17 MW gross) for export sale to PG&E through interconnection to either PG&E's Williams 1101 12 kV distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station. Both existing lines are located on the same power poles along Frontage Road running north to the PG&E Williams Generating Station in Williams. As a result of the Project cogeneration system, the Project would be a net generator of electricity. Since operation of the proposed Project would not result in the net consumption of electricity, it would not contribute to countywide usage. Instead, the Project would directly support the California's Renewable Portfolio Standards (RPS) goal of increasing the percentage of electricity procured from renewable sources.

Natural gas would be used to power all combustion equipment initially upon startup and to restart equipment after a shutdown yet would otherwise be powered by ambient air that is heated through heat exchangers in the cogeneration and process heater systems. The proposed facility would be served by an existing PG&E 8-inch underground natural gas line and header located on the west end of the facility. Natural gas would be also used to power an emergency generator proposed for the facility as well to power certain mobile equipment onsite. According to the Project engineer, these components of the Project are anticipated to consume 12,410 therms (1,200,000 cubic feet of natural gas).

Construction of the Project would require fuel to power equipment. Additionally, worker commutes during operations would represent an ongoing source of fuel consumption.

Energy consumption associated with the proposed Project is summarized in Table 10. Project increases in electricity and natural gas consumption are compared with overall nonresidential consumption in Colusa County in the year 2019, the most recent data available (Appendix D). Project increases in automotive fuel consumption are compared with the regional fuel consumption in the eight counties both within a 75-mile radius of the Project and within the agricultural rich Sacramento Valley in 2020, the most recent full year of data.

Table 10. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Facility Consumption		
Electricity Consumption	0 kilowatt-hours	0.000 percent
Natural Gas	12,410 therms	0.042 percent
Automotive Fuel Consumption		
Project Construction 2023	245,320 gallons	0.036 percent
Project Construction 2024	68,374 gallons	0.010 percent
Project Operations	612,736 gallons	0.091 percent

Source: See Appendix D.

Operations of the Proposed Project would include electricity and natural gas usage. However, as previously described, while the proposed facility would consume electricity, biogas from the process would be used in a new cogeneration system for the generation of electricity, resulting in up to 10 MW of net electric power (17 MW gross) for export sale to PG&E. Therefore, the Project would result in no net consumption of electricity. As shown in Table 10, the Project's increase in natural gas usage of 0.042 percent across all nonresidential uses in the County would also be negligible. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of electricity or natural gas.

Fuel necessary for Project construction would be required. The fuel expenditure necessary to construct the facility and associated infrastructure would be temporary, lasting only as long as Project construction. As indicated in Table 10, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 245,320 gallons during 2023 construction and

68,374 gallons during 2024 construction. This would increase the annual gasoline fuel use in the region by 0.036 percent and 0.01, respectively. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Once operational, the Project would generate approximately 125 heavy-duty trucks trips daily. Additionally, the Project would accommodate approximately 200 employee trips daily (the Project would maintain weekday staffing levels of 50 employees. Assuming each employee arrives in their own vehicle and takes lunch offsite, 50 employees would generate approximately 200 daily traffic trips [50 workers x 4 trips = 200 daily trips]). Thus, the Project is expected to generate 325 daily traffic trips during operations. As indicated in Table 10, this would equate to a consumption of approximately 612,736 gallons of automotive fuel per year, which would increase the annual automotive fuel consumption in the region by 0.091 percent. The amount of operational fuel use was estimated using CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage by individual county. A liberal approach was taken for vehicle trip estimation to ensure potential impacts due to operational gasoline usage were adequately accounted. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Therefore, impacts would be less than significant.

State and Local Plans for Renewable Energy/Energy Efficiency

While the proposed facility would consume electricity, biogas from the process would be used in a new cogeneration system for the generation of electricity. According to the Project engineer, the process would provide up to 10 MW of net electric power (17 MW gross) for export sale to PG&E. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the state. The result would be a net increase in electricity resources available to the regional grid, generated from a renewable source. Therefore, the Project would directly support the RPS goal of increasing the percentage of electricity procured from renewable sources.

Additionally, the Project would also be consistent with the County's General Plan Conservation Element, which is the primary local plan for renewable energy and energy efficiency influencing unincorporated Colusa County. The General Plan Conservation Element addresses energy conservation through the promulgation of several energy consumption-reducing policy provisions. For instance, Policy CON 2-1 seeks to encourage and facilitate the use of on-site alternative energy systems to support industrial operations within the County. As previously described, biogas from the Project process would be used in a new cogeneration system for generation of electricity. The process would provide up to 10 MW of net electric power for

export sale to PG&E. Policy CON 2-5 seeks to encourage the use of green building and design practices in new development, infrastructure, large-scale planning, and rehabilitation projects. The new Project buildings would be required to adhere to the 2019 Building and Efficiency Standards. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018). General Plan Policy CON 2-15 is intended to conserve energy by continuing to require a compact development pattern that focuses growth in and around existing communities. The site currently accommodates the existing Olam Tomato Processing facility and the Project is proposing to redevelop and repurpose the site. According to the U.S. Environmental Protection Agency (USEPA), redevelopment of a site, as proposed by the Project, saves on infrastructure expense and prevents additional energy consumption and environmental degradation compared with building on vacant sites (USEPA 2020). Additionally, the Project proposes to transport all manufactured product from the facility by rail during normal operations. Trucks would only be used if rail is out of service or other extraordinary circumstances. Railways consume up to 5.5 times less energy per ton per mile traveled than trucks (Appendix D).

Lastly, the proposed Project facility would manufacture a product that would be used as an alternative energy source to fossil fuels in order to produce energy, as well as steel. The result would be a net increase in alternative (non-fossil fuel) energy resources available to the global market.

For these reasons, the Project would directly support state and local plans for renewable energy development. Project impacts would be less than significant.

Mitigation Measures:

- No mitigation required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VIII. GEOLOGY RESOURCES – Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
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.	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
ii) Strong seismic ground shaking?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

iii) Seismic-related ground failure, including liquefaction?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
iv) Landslides?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
b) Result in substantial soil erosion or the loss of topsoil?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
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?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
d) Be located on expansive soil, as defined in California Building Code (2010), creating substantial direct or indirect risks to life or property?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Existing Setting:

The Project Site is in the southwestern quarter of Section 32, Township 15 North, Range 2 East, Mount Diablo Base and Meridian. The United States Geological Survey (USGS) *Arbuckle, California* topographic map shows the topography of the site as relatively flat-lying at an approximate elevation of 95 feet above mean sea level.[9]

Geomorphic Region

The Site is situated in the central Sacramento Valley, which is the northern portion of the Great Valley geomorphic province of California. The Sacramento Valley is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, and drains via the Sacramento River and its tributaries south to the Sacramento-San Joaquin river delta. The Sacramento Valley is filled with a thick sequence of Jurassic to Recent-age sedimentary deposits both continental and marine in origin.[10]

[9] United States Geological Survey (USGS). 2018. Arbuckle, California, 7.5-minute Topographic Quadrangle Map, Scale 1:24,000.
[10] Geocon Consultants, Inc. (Geocon). 2021. *Phase I Environmental Site Assessment Report*. March.

Geologic Formations/Stratigraphy

Surficial geology at the Project Site is mapped as recent Quaternary fan deposits, which generally consists of interbedded silt, sand, and gravel deposits.[711] Eaton Drilling Company (Eaton) advanced a boring to a depth of 470 feet in the western portion of the Project site on February 22, 2016, for installation of an industrial water supply well. A California Department of Water Resources (DWR) well completion report indicates the boring encountered alternating layers of clay, sand, and gravel.

Soil Conditions

The United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) Web Soil Survey[12] indicates that the following soil map units occur on the proposed facility site (see Figure 4 of the Biological Resources Assessment Report contained in Appendix C):

- 112 – Westfan loam, 0 to 2 percent slopes
- 114 – Westfan clay loam, 0 to 1 percent slopes
- 127 – Mallard clay loam, 0 to 2 percent slopes

The 112 – Westfan loam, 0 to 2 percent slopes map unit consists of 80 percent Westfan loam and 20 percent minor components. It is a well-drained soil formed from alluvium. Runoff is very low, and no surface is covered with rock fragments. Available water capacity is high. This map unit does not contain any components with a hydric soil rating.[9]

The 114 – Westfan clay loam, 0 to 1 percent slopes map unit consists of 80 percent Westfan clay loam and 20 percent minor components. It is a well-drained soil formed from alluvium. Runoff is very low, and no surface is covered with rock fragments. Available water capacity is very high. This map unit does not contain any components with a hydric soil rating.[9]

The 127 – Mallard clay loam, 0 to 1 percent slopes map unit consists of 85 percent Mallard clay loam and 15 percent minor components. It is a somewhat poorly drained soil formed from alluvium. Runoff is very low, and no surface is covered with rock fragments. Available water capacity is very high. This map unit does not contain any components with a hydric soil rating.[9]

The following additional soil map units occur along the PG&E Williams 1101 12 kV/Wadham 60 kV electrical line route:

- 102 – Capay clay loam, 0 percent slopes, low precipitation, Major Land Resource Area (MLRA) 17

[11]U.S. Geological Survey (USGS). 2021. National Geologic Map Database. https://ngmdb.usgs.gov/. Accessed in June.
[12] Natural Resources Conservation Service (NRCS). 2021. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/. Accessed May.

- 105 – Willows silty clay, 0 to 1 percent slopes, occasionally flooded
- 110 – Hustabel sandy loam, 0 to 1 percent slopes

Regulatory Setting:

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act requires that "sufficiently active" and "well-defined" earthquake fault zones be delineated by the State Geologist and prohibits locating structures for human occupancy on active and potentially active surface faults.

California Building Code

The California Building Code (CBC) provides a minimum standard for building design, which is based on the Uniform Building Code, but is modified for conditions unique to California. The CBC is selectively adopted by local jurisdictions, based on local conditions. The CBC contains requirements pertaining to multiple activities, including excavation, site demolition, foundations and retaining walls, grading activities including drainage and erosion control, and construction of pipelines alongside existing structures.

Impact Discussion:

a,c,d) The Project does not contain any active faults and the Project is not with an Alquist-Priolo Earthquake Fault Zone.[13,14,15] The California Governor's Office of Emergency Services (OES) MyHazards Page does not list the Project site as an earthquake fault zone of required investigation.[11] The site could undergo seismic ground shaking. However, construction would be consistent with the California Building Code. Therefore, impacts would be less than significant.

Liquefaction is the loss of soil strength or stiffness due to a buildup of pore-water pressure during severe ground shaking. Liquefaction is associated primarily with loose, saturated, fine- to medium-grained, cohesionless soils. Effects of severe liquefaction can include sand boils, excessive settlement, bearing capacity failures and lateral spreading. The California Governor's OES MyHazards Page does not list the Project site as a liquefaction zone area.[16] In addition, construction would be consistent with the California Building Code. Therefore, impacts would be less than significant.

Mitigation Measure GEO1 requires that a geotechnical investigation be performed, which will include a soils investigation, prior to application for building permits to determine the

[13] U.S. Geological Survey (USGS). 2021. Map of Quaternary Faults. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. June.
[14] California Office of Emergency Management (OES). 2021. MyHazards. https://myhazards.caloes.ca.gov/. Accessed June.
[15] California Department of Conservation. 2021. EQ Zapp: California Earthquake Hazard Zone Application. https://www.conservation.ca.gov/cgs/geohazards/eq-zapp. June.
[16] California Office of Emergency Management (OES). 2021. MyHazards. https://myhazards.caloes.ca.gov/. Accessed June.

appropriate methods for installation of new foundations for tanks, pipe bridges and other equipment. Construction would be consistent with the California Building Code. Therefore, there would be a less than significant impact associated with potential expansive soils.

Landslides are most likely to form when the ground is sloped. The proposed facility would be located on a site with flat topography. Therefore, there is no potential for landslides on the Project site.

b) The construction of Proposed Project would include grading and earthwork associated with installation of a new paved access entrance and turnaround, installation of new rail spur tracks, and foundations for new tanks, pipe racks, and outdoor stationary equipment as shown in the Preliminary Grading and Drainage Plan (Appendix K). A Notice of Intent (NOI) would be filed for coverage of construction of the Project under a National Pollution Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities, and a Storm Water Pollution Prevention Plan (SWPPP) would be prepared that would include Best Management Practices (BMPs) to manage erosion and the loss of topsoil during construction-related activities (see *Hydrology and Water Quality*). In addition, Mitigation Measure GEO2 would ensure that grading is minimized to the maximum extent in compliance with the County's grading standards. Therefore, soil erosion impacts would be reduced to a less than significant impact.

e) An onsite existing 1,500-gallon septic tank and leach field is located on the east side of the site under the existing gravel parking area for disposal of domestic wastewater. Use of this septic system is proposed for the new CRC Williams facility for non-process (domestic) wastewater disposal. The total projected domestic wastewater volumes generated from the facility would be similar to, or less than, Olam's past use of the facility. Therefore, a new or expanded septic system is not anticipated to be required for the Project. There would be no impact.

f) A search of the University of California Museum of Paleontology collections database lists 213 previously recorded paleontological resources in Colusa County.[17] However, none of these resources occur in the Project area.[14] In addition, these resources were found in much older geologic formations including the Cretaceous and Jurassic periods. Therefore, because site geology comprises more recent formations and no resources have been observed on the site to date, no impacts on paleontological resources are expected.

Mitigation Measure: The following mitigation measures will reduce impacts related to geology resources to a less than significant level:

8. **GEO1:** A geotechnical investigation, including a soils investigation, shall be performed prior to submittal of building permit applications. Recommendations of the geotechnical investigation shall be implemented to ensure proper final design of new foundations for tanks, pipe bridges, and other equipment.

[17] University of California Museum of Paleontology (UCMP). 2021. Online Localities Database https://ucmp.berkeley.edu/collections/databases/. June.

9. **GEO2:** In accordance with Colusa County Zoning Code 44-5,40.050 Grading Standards, grading shall be limited to building pads and access drives thereto, and extensive grading shall be discouraged.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Existing Setting:

As discussed above under Air Quality, an Emissions Assessment was prepared for the Project by ECORP Consulting Inc. which is contained in Appendix B and includes an analysis of Project impacts associated with GHG emissions. The results of the analysis is discussed below; GHG emissions calculations are contained in Appendix B.

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Appendix B).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (Appendix B).

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Impact Discussion:

a-b) The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead

agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to Senate Bill (SB) 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Specifically, the Project will be assessed for consistency with regulations or requirements adopted by the 2008 Climate Change Scoping Plan and subsequent updates (Appendix B).

Consistency with Plans, Policies, or Regulations

GHG emissions associated with the Project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with new vehicular trips and indirect source emissions, such as electricity usage for lighting.

Table 11 illustrates the specific construction generated GHG emissions that would result from construction of the Project. As shown in Table 11, Project construction would result in the generation of approximately 533 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease.

Table 11. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Project Site Construction (year one)	2,490
Project Site Construction (year two)	694
Total Construction	**3,184**

Source: CalEEMod version 2016.3.2. Refer to Attachment B in Appendix B for Model Data Outputs.

Long-term operational GHG emissions attributable to the Project are identified in Table 12.

Table 12. Operational-Related GHG Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Mobile Emissions	
Onsite Trucks (Idling)	34
Offsite Trucks	2,766
Trains	281
Employee Trips	186
Onsite Off-road Equipment	164
Stationary Emissions	
Natural Gas from Start-Ups	1,839
Cogeneration Unit	424,635
Emergency Natural Gas Generator	13
Project Emissions Subtotal	***429,918***

Table 12. Operational-Related GHG Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Displaced Open Burning Emissions	
Open Burning Emissions	*-715,579*
Project Emissions Total	**-285,661**

Source: CalEEMod version 2016.3.2. Refer to Attachment B of Appendix B for Model Data Outputs.
Notes: Once operational, the Project would be able to process up to 763,000 gross wet tons of renewable biomass (feedstock) per year. For the purposes of this analysis, it is assumed that 60 percent of the redirected orchard biomass (381,500 tons) would be disposed of via open burning if not for the Project.
CO2e carbon dioxide equivalents

As shown in Table 12, Project operations would result in the net reduction of approximately 285,661 metric tons of CO_2e annually.

As previously described, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Specifically, the Project is assessed for consistency with regulations or requirements adopted by the 2008 Climate Change Scoping Plan and subsequent updates (Appendix B).

Consistency with CARB's Scoping Plan

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other State agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations. It does not provide recommendations for lead agencies to develop evidence-based numeric thresholds consistent with the Scoping Plan, the State's long-term GHG goals, and climate change science. Under the Scoping Plan, however, there are several State regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other State agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-global warming potential (GWP) GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet statewide GHG reduction goals and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Appendix B highlights measures in the Scoping Plan that have been, or will be, developed under the Scoping Plan and presents the Project's consistency with Scoping Plan measures. The Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law and to the extent that they are applicable to the Project. Based on the analysis in Appendix B, the Project would be consistent with the applicable strategies and measures in the Scoping Plan.

The Project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in Executive Order (EO) S-03-05 and Senate Bill (SB) 32. EO S-03-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the State on a trajectory toward meeting these long-term GHG goals, although the specific path to compliance is unknown.

To begin, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (Appendix B). With regard to the 2050 target for reducing GHG emissions to 80 percent below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (Appendix B):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in SB 32 and EO S-03-05. This is confirmed in the Second Update, which states (Appendix B):

> The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in [Assembly Bill] AB 32, SB 32, and AB 197.

The Project is consistent with the GHG emission reduction measures in the Scoping Plan and would not conflict with the State's trajectory toward future GHG reductions. For instance, the proposed Project would result in the conversion of orchard biomass to a biocarbon product using a non-combustion process involving thermal conversion of biomass (the biocarbon product would then be used in place of fossil fuels in energy and steel production). The majority of the biomass used for this process would be disposed of via open burning if not for the Project. As shown in Table 12, Project conversion of orchard biomass to a biocarbon product would potentially displace up to 715,579 metric tons of CO_2e annually, for a total net reduction of

279,895 metric tons of CO_2e annually when considering Project operational emission sources. Thus, the Project would result in a beneficial impact in terms of eliminating GHG emissions that would otherwise be generated.

As previously described, the Project would use self-generated biogas for the process energy and would provide up to 10 MW of net electric power (17 MW gross) for export sale to PG&E. Thus, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact to the state's efforts to substantially reduce GHG emissions. The energy produced by the Project would displace the GHG emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal).

Table 13 shows the emissions that would potentially be displaced by the proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric) (Appendix B).

Table 13. Proposed Project Displaced Greenhouse Gas Emissions from Onsite Electricity Generation (Metric Tons)

Emission Source	Displaced Emissions (metric tons)			
	CO_2	CH_4	N_2O	CO_2e
Emissions Displaced Annually				
Displaced Natural Gas-Source Emissions	7,461	0.00	0.00	7,461
Displaced Coal-Source Emissions	1,191	0.01	0.01	1,193
Total	**8,652**	**0.01**	**0.01**	**8,654**
Emissions Displaced over 30 Years (tons)				
Displaced Natural Gas-Source Emissions	223,830	0.00	0.00	223,830
Displaced Coal-Source Emissions	35,725	0.24	0.18	35,783
Total	**363,376**	**0.33**	**0.25**	**259,613**

Source: Appendix B

As shown, the Project would potentially displace approximately 8,654 metric tons of CO_2e per year, and approximately 259,613 metric tons of CO_2e over the course of 30 years.

While the Project would emit some GHG emissions during construction and operations, the contribution of renewable resource energy production, to meet the goals of the Renewable Portfolio Standard (Scoping Plan Measure E-3), would result in a net cumulative reduction of GHG emissions, a key environmental benefit. (Scoping Plan Measure E-3, Renewable Portfolio Standard, of the Climate Change Scoping Plan requires that all investor-owned utility companies generate 60 percent of their energy demand from renewable sources by year 2030.) Therefore, the short-term minor generation of GHG emissions during construction which is necessary to

create this new, low-GHG-emitting power-generating facility, as well as the amount generated during ongoing maintenance operations, would very likely be more than offset by GHG emission reductions associated with Project-generated energy during operation.

Increasing sources of renewable energy is one of the measures identified under the Scoping Plan to reduce statewide GHG emissions. The proposed Project would reduce GHG emissions in a manner consistent with SB 32 and other California GHG-reducing legislation by creating a new source of renewable energy to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use.

In addition, the Project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 or impede the state's trajectory toward the previously described statewide GHG reduction goals for 2030 or 2050. Therefore, impacts would be less than significant.

Mitigation Measures:

- No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIAL – Would the project:				
a) Create a significant hazard to the public or the environment though the routine transport, use, or disposal of hazardous materials?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
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?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
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?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Impact Discussion:

a-b) During construction of the Project, common hazardous materials, including gasoline and other motor vehicle fuels, solvents, lubricating oils, welding gases, used oil, coatings, and adhesives may be used. Standard Best Management Practices (BMPs) would be utilized to minimize the potential for small, localized accidental releases of these materials.

Hazardous materials that may be used, handled, and stored during operation of the Project, include but would not be limited to:

- 18,000-gallon main storage tank of 19.5 percent aqueous ammonia and day tank associated with the SCR;
- 2,500-gallon aboveground diesel storage tank;
- 10,000-gallon aboveground pellet coating tank with a non-petroleum oil;
- Propane;
- Cylinder gases;
- O_2 scavengers;
- Antiscalants;
- Stoddard solvent;
- Lubricating oil; and
- Coatings and adhesives.

A Hazardous Material Business Plan (HMBP) is required to be prepared and submitted to the Colusa County Environmental Health which is Colusa County's Certified Unified Program Agency (CUPA) to govern the use, handling, and routine transport of these materials. In addition, the 2,500-gallon diesel storage tank triggers the requirement for preparation of a Spill, Prevention, Countermeasure, and Control (SPCC) Plan for the Project facility. Secondary containment would be installed in compliance with the SPCC Rule.

Storage of greater than 500 pounds of pure ammonia in a 19.5 percent solution is subject to the requirements of California's Accidental Release Program (CalARP) due to the acute toxicity that the compound would pose if an accidental release would occur. Therefore, a Risk Management Plan (RMP) for the storage of 19.5 percent aqueous ammonia was prepared for the Project in compliance with CalARP and Colusa County Environmental Health/CUPA requirements; the RMP is contained in Appendix E. The RMP models a worst-case release scenario for a hypothetical rupture and release of the entire contents of the aqueous ammonia vessel within 10 minutes, per regulatory requirement. The results of the model calculation indicate that the area

impacted by toxic concentrations (greater than 200 parts per million, see Appendix E) is a circle with a radius of approximately 0.1 mile from the vessel, which is located in the central portion of the proposed facility. Per the model, the effects of this release would not extend beyond the facility property boundary.

As a result of use of the above hazardous materials, there would be some small amount of hazardous waste stored on site for ultimate disposal/recycling. The Project facility is expected to qualify as a small quantity hazardous waste generator.

No other hazardous materials or hazardous waste are expected to be used, handled, or generated as a result of the process. Solid residue from blowdown water and the water treatment processes would be combined with any sand generated from the fine screening process to form a soil amendment co-product. These solids are expected to be inert and non-hazardous. In addition, process water would be recycled to the maximum extent. An Industrial WDR would be obtained from the Central Valley RWQCB for proposed recycling of process water onsite using the existing wastewater storage pond.

Finally, certain areas of the facility would be considered hazardous areas under National Fire Protection Association (NFPA) 70 as Class II, Division 2 areas and Class I, Division 2 areas for the presence of combustible dust and the presence of both flammable gases or vapors and combustible dust, respectively. Therefore, all systems, equipment, and materials would conform to American Society of Mechanical Engineers (ASME), National Fire Protection Association (NFPA), and American Society of Testing and Materials (ASTM) standards.

Mitigation Measures HAZ1 through HAZ6 shall be implemented to ensure that strict standards are adhered to for the management of hazardous materials, hazardous waste, and process solids and process water under the Project to ensure the protection of the health and safety and the environment. With implementation of these measures, impacts would be less than significant.

c) The nearest school to the Project facility is located approximately 3.3 miles north of the facility, in the City of Williams. The nearest school in Arbuckle is over 6 miles south of the Project facility. Routine use of a small amount of hazardous materials, such as fuel and oil for trucks and heavy equipment, would be used during any replacement of power poles or reconductoring of the PG&E Williams 1101 12 kV or Wadham 60 kV electrical line; however, this activity would occur over 0.5 mile away from any schools and standard best management practices would be used to prevent localized accidental spills of this material. Therefore, there would be no impact.

d) A Phase I Environmental Site Assessment (ESA) was prepared for the Project facility site(Appendix F). The results of the Phase I ESA indicate that the proposed site is not on a current list of hazardous materials sites and no hazardous or toxic waste sites are located on or adjacent to the proposed Project site. No Recognized Environmental Conditions (RECs) were identified at the site. In any pole replacement or reconductoring of the PG&E Williams 1101 12 kV or Wadham 60 kV electrical lines can and would be completed within PG&E right-of-way. Therefore, there would be no impact.

e) The nearest airport to the Project facility is a private gliderport located more than 4 miles to the north, in Williams on Husted Road. The next nearest airport is the Colusa Airport located 8 miles to the northeast of the Project facility. Therefore, due to their distance, operation of the Project facility would not affect either of these airports.

Replacement of power poles along the PG&E Williams 1101 12 kV or Wadham 60 kV electrical line route to Williams could potentially have an effect on operations of the gliderport. There is no airport land use plan for the gliderport as it is privately owned and operated. In addition, the new height of the power poles would not trigger coordination with the Federal Aviation Administration (FAA). Impacts on the gliderport would be potentially significant without mitigation. However, Mitigation Measure HAZ7 would require notification of any PG&E pole replacement with the owner and operator of the gliderport. With implementation of this measure, impacts would be reduced to less than significant levels.

Mitigation Measure HAZ8 would ensure that proper procedures are followed to ensure that any required lighting and markings are installed on all stacks and the cooling tower at the Project facility in conformance with the Federal Aviation Administration's (FAA) Advisory Circular[18] on obstruction marking and lighting. With implementation of this measure, the proposed structures would not interfere with air traffic in and around the area.

f) The construction and operation of the Project would comply with the California Fire Code as well as the County's building code. Therefore, the Project would not impair the current Colusa County Local Hazard Mitigation Plan Update, including any emergency response or emergency evaluation.[19] Therefore, there would be no impact.

g) The Project is not located in a CAL FIRE designated State Responsibility Area or on lands classified as very high fire hazard severity zone. Due to the industrial nature of the facility and agricultural uses in the surrounding lands, wildfire risk could be considered low to very low with minimal potential to exacerbate wildfire risks and accompanying impacts. The construction and operation of Project would comply with the California Fire Code as well as the County's building code. Therefore, the Project would not impair the current Colusa County Local Hazard Mitigation Plan Update.[21] Therefore, there would be no impact.

Mitigation Measures: The recommended mitigation measure will reduce impacts related to hazards and hazardous materials to less than significant level:

10. **HAZ1:** The applicant shall submit a Hazardous Materials Business Plan for review and approval by the CUPA prior to operation.

11. **HAZ2:** The applicant shall have a Spill Prevention Control and Countermeasures (SPCC) Plan prepared by a registered engineer in compliance with the SPCC Rule and shall receive review and approval of the SPCC Plan by the CUPA prior to operation.

[18] Federal Aviation Administration (FAA). 2020. Obstruction Marking and Lighting. Advisory Circular 70/7460-1M. November 16.
[19] Colusa County. 2018. *Local Hazard Mitigation Plan Update*. December.

12. **HAZ3:** The applicant shall submit a Risk Management Plan for review and approval by the CUPA prior to operation.

13. **HAZ4:** All materials, construction, installation, and operation of the new facility shall abide by the American Society of Mechanical Engineers (ASME), the National Fire Protection Association (NFPA) and the American Society of Testing and Materials (ASTM) standards.

14. **HAZ5:** During commissioning of the facility and prior to operation of the facility, solid waste streams shall be properly characterized prior to disposal.

15. **HAZ6:** An Industrial Waste Discharge Requirements (WDR) shall be issued by the Central Valley Regional Water Quality Control Board for the facility prior to discharge of process water to any aboveground wastewater storage ponds on site.

16**. HAZ7:** Prior to replacement of any PG&E power poles, the applicant shall notify the owner and operator of the Williams gliderport regarding the nature and timing of the pole replacement, including the height and location of the new poles.

17. **HAZ8:** The applicant shall follow Federal Aviation Administration (FAA) procedures regarding any required lighting and markings on the stacks and cooling tower proposed for the facility in accordance with FAA's latest Advisory Circular 70/7460-1M titled Obstruction Marking and Lighting.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
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:	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
i) result in substantial erosion or siltation on- or off-site;	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	**[ ]**	**[**x**]**	**[ ]**	**[ ]**
iv) impede or redirect flood flows?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
e) Conflict with or obstruct implementation or a water quality control plan or sustainable groundwater management plan?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

Existing Setting:

A Drainage, Hydrology and Water Quality Analysis was performed for the Project by ECORP Consulting, Inc. (Appendix G). A summary of existing conditions and results of the analysis are contained below.

Drainage

The elevation of the Project site varies from approximately 98 feet above mean sea level (ft msl) along the north property line to approximately 91 ft msl in the southeast and southwest corners of the site. Runoff in unimproved areas of the site occurs by sheet flow. In paved and developed parts of the site, runoff was collected in drop inlets and small box culverts covered with grates and routed to a central collection point, where it may have been pumped to an onsite process water pond for reuse in the former tomato processing operations. The Project site is in an area of minimal flood hazard risk and is not in or near a 100-year floodplain (Appendix G).

ECORP made field observations during a site reconnaissance on May 7, 2021 related to water infrastructure and drainage features at the site under existing, baseline conditions. The northern 20.538 acres of the approximately 48.538-acre property are referred to as Parcel 3 (see ALTA Survey maps in Appendix G). The west and north boundaries of Parcel 3 have berms that prevent any onsite or offsite flow of stormwater runoff. The eastern boundary of Parcel 3 allows stormwater runoff to move by sheet flow to a small offsite drainage swale. The offsite drainage swale flows toward the north to a corrugated metal pipe drainage inlet, which conveys the runoff across the adjacent driveway into an irrigation drain that flows toward the south parallel to the eastern site boundary. Most of Parcel 3 is undeveloped, exposed ground except for a concrete pad area in the central part of the south area of this parcel. Except for the eastern area, runoff from Parcel 3 moves by sheet flow toward the south.

The central 5.717 acres of the property are referred to as Parcel 2 (see ALTA Survey maps in Appendix G). A berm is present along the western boundary of Parcel 2, which prevents onsite

or offsite flow of stormwater runoff. The eastern boundary of Parcel 2 includes the northern part of a wastewater pond. The berms for the wastewater pond extend approximately five feet above the natural grade. Runoff from the east berm of the pond flows into the shallow drainage swale that directs stormwater to the north toward the drainage inlet described above. The central part of Parcel 2 includes concrete pads and a large warehouse building. There are several drainage inlets and drainage culverts associated with the concrete pads and building that are reported to convey stormwater to a sump in the eastern part of Parcel 1 (Regional Water Quality Control Board [RWQCB] 2018)20. Stormwater from undeveloped areas of Parcel 2 flows by sheet flow primarily to the south.

The southern 22.283 acres of the property are referred to as Parcel 1(see ALTA Survey maps in Appendix G). The western two-thirds of this parcel consists of the former tomato processing plant equipment, a rail spur, and related facilities. This part of Parcel 1 is paved and contains numerous buildings. Stormwater is collected in several drainage inlets and culverts that reportedly convey the runoff to a sump in the eastern part of the parcel (RWQCB 2018). Runoff from the paved plant area along the south boundary of the site flows offsite onto Myers Road. The eastern part of Parcel 1 includes the southern part of the former wastewater sump and a gravel parking lot that overlies a septic leach field. Runoff from the east berm of the pond and the gravel parking lot is conveyed by sheet flow to a shallow drainage swale just east of the property boundary that flows south along a paved driveway to Myers Road. There was no apparent drainage inlet or other collection or conveyance feature observed at the south end of this shallow drainage swale.

According to the WDR issued for the Olam facility (RWQCB 2018), the former wastewater pond has a 12-inch low-permeability liner constructed from a 50 percent mixture of imported clay and native onsite soil. With two feet of freeboard, the pond has a reported capacity of 2.7 million gallons (approximately 8.25 acre-feet). The freeboard space has an additional volume capacity of approximately 3.1 acre-feet. An inactive pumping station and pipelines to discharge water to and pump water from the wastewater pond are present at the site. As described above, the berm surrounding the pond is approximately five feet higher than the surrounding native ground elevation. The bottom of the pond is approximately six feet below the surrounding native ground elevation.

The facilities to be installed as part of the Project would combine the Parcel 2 and Parcel 3 areas into the north area of the site while Parcel 1 would constitute the south area of the site with respect to stormwater runoff. CRC has provided ECORP with estimates prepared by an engineering consultant for peak stormwater flows for various design storm events and the runoff volume for a 100-year, 24-hour storm event. Table 14 summarizes the peak runoff rates, in cubic feet per second, provided by CRC for the north part of the Project site. Table 15 summarizes the peak runoff rates, in cubic feet per second, for the south part of the site. In general, the peak runoff for a 100-year storm is twice that for the 10-year event for each parcel.

[20] Regional Water Quality Control Board, Central Valley Region (RWQCB). 2018, Waste Discharge Requirements for Olam West Coast, Inc. and T&P Farms, Olam West Coast Williams Facility, Colusa County, Order R5-2018-0006

Table 14. North Area Peak Stormwater Runoff							
	Peak Outflow (cubic feet per second)						
Storm Frequency	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Existing Conditions	13.52	20.36	29.68	37.48	48.08	56.39	64.72
With New Facilities	21.66	31.94	45.66	57.03	72.38	84.36	96.34
Proposed Project Conditions with New Retention Pond	0.00	0.00	0.00	3.729	25.44	44.33	62.95

Table 15 South Area Peak Stormwater Runoff							
	Peak Outflow (cubic feet per second)						
Storm Frequency	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Existing Conditions	14.7	21.72	31.18	39.04	49.67	57.98	66.29
Proposed Project Conditions	14.7	21.72	31.18	39.04	49.67	57.98	66.29

In addition to the peak runoff rates, CRC also provided ECORP with engineering estimates of the peak runoff volumes for a 100-year, 24-hour storm event. The peak runoff volumes are shown, in acre-feet, for the north area and the south area in Tables 16 and 17, respectively.

Table 16. North Area Total Runoff Volume (acre-feet) 100-yr, 24-hr Storm	
Existing Conditions	6.8
With New Facilities	7.1
Proposed Project Conditions with New Retention Pond	2.4

Table 17. South Area Total Runoff Volume (acre-feet) 100-yr, 24-hr Storm	
Existing Conditions	6.7
Proposed Project Conditions	6.7

Groundwater

The proposed CRC Williams Facility is located within the Colusa Subbasin within the larger Sacramento Valley Groundwater Basin. The Colusa Subbasin is designated as basin number 5-021.52 by the California Department of Water Resources (DWR) (Appendix G). The basin encompasses most of Colusa and Glenn Counties east of the Coast Ranges and west of the Sacramento River, with an area of approximately 1,131 square miles, or 723,823 acres. The

bottom of the subbasin is defined either by crystalline bedrock or the base of freshwater, below which saline water is present in the porous sediments that make up the groundwater aquifers.

The primary aquifer in the Project area is the Tehama Formation. Groundwater in the Colusa Subbasin occurs under semiconfined to confined conditions within interconnected channels and lenses of high-permeability sand and gravel interbedded with thick low-permeability sediments such as silts and clays (Colusa GSA and Glenn GSA 2021)[21]. While there are no defined continuous aquitard units within the subbasin, the fine-grained sediments tend to impede vertical movement of groundwater and may limit deep recharge of the channels and lenses of coarser sediments that comprise the water-bearing aquifer deposits.

Based on groundwater contour maps provided in the draft Groundwater Sustainability Plan (GSP) (Appendix 3B in Colusa GSA and Glenn GSA 2021), groundwater in the subbasin generally flows eastward from the edge of the Coast Ranges on the west toward the Sacramento River on the east, and from north to south parallel to the Sacramento River.

In general, groundwater levels within the Colusa Subbasin fluctuate seasonally due to increased pumping demand in the summer and increased recharge during the winter and spring. In addition, groundwater levels fluctuate due to longer climatic cycles consisting of wet periods and drought periods (Appendix G). The well location for this hydrograph is just southwest of College City, approximately nine miles southeast of the Project site.

As indicated by the water levels shown in Appendix G, prior to the 2012-2016 drought, past dry periods primarily affected the summer season low groundwater elevations but did not substantially affect the winter season high groundwater elevations. For example, during the 1987-1991 drought, the seasonal peak groundwater elevations were between 40 and 45 feet below the surface, which is comparable to the high groundwater elevations in the five years prior to and after the drought period. However, as the drought progressed, the summer low elevation became progressively lower, eventually dropping to approximately -20 feet (20 feet below sea level) in 1991, whereas the groundwater lows prior to and after this drought period were at least 35 feet higher. However, this pattern appears to have changed with recent drought periods, with both the seasonal high and low groundwater elevations dropping appreciably beginning in 2012, as shown on Figure 2-5 of Appendix G, due to reduced rainfall available for recharge and potentially increased groundwater pumping due to curtailment of surface water deliveries for irrigation.

The current volume of groundwater within the Colusa Subbasin, above crystalline bedrock and the base of freshwater, is estimated to be between 26 million acre-feet to 140 million acre-feet (Colusa GSA and Glenn GSA 2021). Current groundwater pumping is approximately 499,000 acre-feet per year and is projected to increase to as much as 559,000 acre-feet per year by 2070. The sustainable yield[22] is estimated to be 500,000 acre-feet per year currently and is projected to increase to 551,000 acre-feet per year by 2070.

[21] Colusa Groundwater Sustainability Agency (GSA) and Glenn GSA. 2021, Groundwater Sustainability Plan, Draft Report, April 2021, https://colusagroundwater.org/projects/groundwater-sustainability-plan/, accessed May 18, 2021

[22] Sustainable yield refers to the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin, that can be withdrawn annually from the groundwater subbasin without causing an undesirable result (see additional discussion in Sections 4.3 and 4.4 of the Water Supply Assessment contained in Appendix H).

In the Project vicinity, groundwater flows toward the northeast. At the Project location, the hydraulic gradient, or slope of the groundwater surface, averages approximately 10 feet per mile, which is equivalent to a gradient of about 0.002 ft/ft.

Appendix 3A of the draft GSP for the Colusa Subbasin (Colusa GSA and Glenn GSA 2021) provides hydrographs showing the change in the groundwater elevations and depth to groundwater in the Project vicinity. The two nearest wells to the Project site presented in Appendix 3A of the draft GSP are designated by State Well Numbers 14N02W13N001M (referred to herein as Well 13N) and 15N02W19E001M (referred to herein as Well 19E). Well 13N is located approximately four miles southeast of the Project site and Well 19E is located approximately three miles northwest of the Project site. The water level data from these two wells are shown on Figures 2-6 and 2-7 in Appendix G.

At Well 13N, located to the southeast, the depth to groundwater has varied from approximately 20 feet below ground surface (ft bgs) to approximately 50 ft below ground surface (bgs) since the 1950s, as shown on Figure 2-6 of Appendix G. Seasonal fluctuations average approximately 15 feet. The depth to groundwater generally varies in response to wet and dry climatic cycles, similar to those depicted on Figure 2-5 of Appendix G. (Colusa GSA and Glenn GSA 2021).

At Well 19E, located to the northwest, groundwater levels were generally 20 to 30 feet bgs prior to the 1980s. However, in approximately 1983, irrigation in some parts of the Colusa Subbasin transitioned from groundwater to imported surface water (Colusa GSA and Glenn GSA 2021). As a result of this transition, the depth to groundwater at Well 19E increased to approximately 10 to 15 ft bgs and remained relatively stable in that range until 2020, and seasonal fluctuations averaged less than 10 feet. However, the current dry conditions and reduced availability of surface water have caused the water level at Well 19E to drop recently to approximately 35 ft bgs, as indicated on Figure 2-7 of Appendix G.

Three groundwater supply wells have previously been drilled at the site, at the locations designated as Wells #1 through #3 on the Site Plan for the Project dated June 30, 2021 (see Appendix G). Well #1 has been abandoned and plugged. Well #2 and Well #3 were used to supply the former Olam Tomato Processing facility and will be used to supply water for the Project.

Well #2 was drilled in 1981 to a total depth of 500 feet. The predominant materials encountered throughout the borehole were sand and sandy clay. Coarse-grained aquifer deposits were identified from 308 ft bgs to 316 ft bgs, from 370 ft bgs to 390 ft bgs, and from 420 ft bgs to 440 ft bgs. The well was completed with a 16-inch steel casing to 440 ft bgs, with the perforated interval (i.e. the interval that allows groundwater to flow into the well) from 360 ft bgs to 440 ft bgs. Gravel was placed in the annulus between the casing and the wall of the borehole from 50 ft bgs to 440 ft bgs. A sanitary seal was installed to a depth of 50 ft bgs. The depth to water and the production capacity of Well #2 were not reported at the time the well was drilled. The Well Completion Report for Well #2 is provided in Appendix G.

Well #3 was drilled in 2016 to a total depth of 800 feet. The predominant material encountered throughout the borehole was a brown clay. Coarse-grained aquifer deposits were identified from 310 ft bgs to 350 ft bgs and from 370 ft bgs to 440 ft bgs. The well was backfilled to 470 feet

and completed with a 16-inch steel casing to that depth, with perforated intervals from 300 ft bgs to 350 ft bgs and from 370 ft bgs to 420 ft bgs. The gravel pack was placed in the annulus between the casing and the wall of the borehole from 240 ft bgs to 470 ft bgs, with a 10-foot bentonite seal above the gravel pack. A sanitary seal was installed to a depth of 230 ft bgs. The depth to water at the time the well was installed was reported to be 57 ft bgs. During a six-hour production test, Well #3 was reported to yield 2,050 gallons per minute (gpm) with a drawdown of 43 feet, yielding a specific capacity of 47.7 gpm/ft. Based on the specific capacity and the screened interval, the aquifer at the Well #3 location may have a transmissivity of 11,000 ft^2/day and a hydraulic conductivity of 110 ft/day (equivalent to 4 X 10^{-2} cm/sec) (Appendix G). The Well Completion Report for Well #3 is provided in Appendix G.

According to information provided to CRC from Olam, the two existing onsite wells are set up to pump 900 gpm each. For 2019, approximately 29 million gallons of groundwater were produced each month during the summer tomato processing season while during the off-season, approximately 5 million gallons of groundwater were produced each month. The total groundwater production in 2019 is reported to have been 179 million gallons, or approximately 550 acre-feet. From 2012 through 2016, total groundwater production is reported to have ranged from 166 million gallons (509 acre-feet) to 222 million gallons (681 acre-feet) (RWQCB 2018).[23]

The primary source of water for the Project would be the two existing supply wells, Well #2 and Well #3. Project water demand includes water used in the process for cooling, pellet mixing, and boiler feedwater for the cogeneration system. CRC estimates that net annual industrial process water demand for the cogeneration system will be approximately 1,004 acre-feet. Additional process water demand will be met by water recovered and recycled from the biomass drying process. The anticipated potable demand for employees is anticipated to be 1,000 gallons per day, which is about one acre-foot per year. Approximately 17 acre-feet per year will be used for dust control in the raw material storage areas on the north part of the site. Annual fire water storage and maintenance will be approximately three acre-feet per year. Thus, the annual water demand is anticipated to be 1,025 acre-feet per year. Further details regarding the water demand are available in the Water Supply Assessment contained in Appendix H.

It is anticipated that the facility will operate continuously throughout the year. Thus, the 1,025 acre-foot annual water demand is equivalent to a groundwater pumping rate of approximately 635 gpm. As noted above, each well at the site is currently set up to pump at up to 900 gpm, while the full capacity of each well may be more than 2,000 gpm.

Groundwater Quality

Table 2-6 of Appendix G provides the data from Well #2 for samples collected in May 2019 as part of the monitoring requirements for Olam's potable water system permit along with typical water quality standards. Olam's groundwater sample results are also contained in Appendix G. These standards consist of primary and secondary drinking water maximum contaminant levels and Regional Water Quality Control Board Basin Plan limits for discharge to surface waters.

[23] Regional Water Quality Control Board, Central Valley Region (RWQCB). 2018, Waste Discharge Requirements for Olam West Coast, Inc. and T&P Farms, Olam West Coast Williams Facility, Colusa County, Order R5-2018-0006.

Based on the information presented in Table 2-6 of Appendix G, the existing baseline groundwater quality meets water quality standards.

Impact Discussion:

a) The proposed Project is a new use on an existing industrial site. Prior to conducting any demolition, grading, or construction activities, Mitigation Measure HYD1 would require CRC to file an NOI to comply with the construction general stormwater permit with the State Water Resources Control Board and the Central Valley Regional Water Quality Control Board and a Construction-Storm Water Pollution Prevention Plan (C-SWPPP) would need to be prepared.

The total disturbance area on the Project site would not change but additional paved areas, processing equipment, and buildings would be added to the site. However, installation of a stormwater retention basin would reduce the peak runoff rate and volume of stormwater from the site due to the project to levels that would be less than under current conditions. Mitigation Measure HYD2 requires that CRC file an NOI with the Regional Water Quality Control Board and to prepare an Industrial SWPPP (I-SWPPP).

Implementation of the measures identified in the NOIs and SWPPPs would preclude polluted runoff from leaving the site, preventing any violation of water quality standards and related degradation of surface water. Since the volume of runoff would be less than under current conditions and water quality would be protected, there would not be any potentially significant impacts related to water quality from stormwater.

Groundwater would be used for industrial process water and for employee potable supply needs. As noted in Table 2-6 of Appendix G, the groundwater meets water quality standards. Pumped groundwater may be treated prior to use as process water or potable supply for employees.

The majority of industrial process water used at the site would be recycled back into the process. Any process water that is not recycled would be discharged to the ground or stored in ponds (both lined and unlined); this would require submittal of a Report of Waste Discharge (ROWD) for a WDR permit pursuant to Mitigation Measure HYD3. The WDRs would include discharge limitations to prevent degradation of both surface water and groundwater quality, along with a Monitoring and Reporting Program (MRP) to verify that water quality standards would not be exceeded.

Preparation and submittal of the ROWD and compliance with the requirements of the WDRs, including the MRP, would prevent violations of water quality standards and related degradation of surface water and groundwater.

Implementation of the measures described above related to stormwater management and WDRs would reduce any potential impacts related to water quality standards, waste discharge requirements, or water quality degradation to less than significant levels.

b) Groundwater use at the site in the past has ranged from 509 acre-feet per year to 681 acre-feet per year from 2012 through 2016 and was 550 acre-feet per year in 2019. Groundwater demand for the Project is estimated to be 1,025 acre-feet per year. For comparison, the volume of groundwater in storage in the Colusa Subbasin is estimated to be between 26 million acre-feet and 140 million acre-feet. Current groundwater pumping in the subbasin is approximately 499,000 acre-feet per year and is projected to increase to 559,000 acre-feet per year by 2070. The

sustainable yield of the Colusa Subbasin is estimated to be 500,000 acre-feet per year currently and is projected to increase to 551,000 acre-feet per year by 2070. While the 2070 estimated groundwater pumping slightly exceeds the projected sustainable yield, the Colusa GSA and Glenn GSA (2021) indicate that future management actions and programs are anticipated to maintain sustainable management of the Colusa Subbasin.

Overall, the Project water demand represents an extremely small percentage of the volume of groundwater in storage, the current and future annual groundwater pumping, and the current and future sustainable yield. For example, the 1,025 acre-foot per year Project demand is approximately 0.2 percent of the current and future sustainable yield estimates of 500,000 acre-feet per year and 551,000 acre-feet per year for the Colusa Subbasin (see Appendix G and Appendix H).

Estimates of the drawdown caused by pumping of the onsite supply wells to meet the Project demand indicate that water levels in the nearest offsite wells would decline by no more than eight feet after one year of continuous pumping. In comparison, seasonal fluctuations in groundwater levels in this part of the Colusa Subbasin range from 10 feet to 15 feet per year while longer-term fluctuations due to climatic cycles are in the range of 30 feet. The estimated drawdown in the nearest offsite wells is also a very small fraction (2 percent) of the 400-foot total water column in the local aquifer, as indicated by the data from the onsite supply wells.

While additional pavement and buildings may be added to the site as part of the Project, it is anticipated that stormwater would be retained onsite and either be used to supplement the process water supply or be allowed to percolate and recharge the groundwater aquifer. Thus, the Project would not interfere with groundwater recharge but would instead enhance the volume of recharge or offset groundwater pumping by an equivalent amount.

Overall, the Project would not cause any measurable decrease in groundwater supplies and would not interfere with or reduce groundwater recharge. In fact, the Project could enhance recharge through conjunctive use of stormwater, or by allowing the retained stormwater to percolate into the subsurface. The Project would not impede sustainable management of the groundwater basin. Therefore, there would be no significant impacts from the Project related to groundwater supplies, groundwater recharge, or sustainable groundwater management.

c) The Project would result in only minor changes to the ground surface, by adding additional pavement and buildings. However, the site is already intensely developed and contains large areas of existing impervious surfaces. Drainage patterns would only be altered in very minor ways.

The current and proposed stormwater management systems prevent any substantial erosion. Use of a retention basin would reduce the peak runoff rates and the total runoff volume to values that are less than existing baseline conditions. Onsite retention of stormwater would also minimize any contribution from the site to existing or planned stormwater drainage systems. The Project site does not exist in an area prone to flooding.

Preparation and implementation of the appropriate NOIs and SWPPPs under Mitigation Measures HYD1 and HYD2, would minimize or avoid any potential impacts related to drainage, erosion, and runoff. Implementation of measures in the SWPPPs are expected to either eliminate any impacts related to drainage, erosion, and runoff, or would make them less than significant.

d) The California Governor's OES MyHazards Page does not list the Project site as a tsunami emergency response planning zone.[24] The Project is not within a floodplain identified by the Flood Emergency Management Agency (FEMA).[18,25] The Colusa County Safety Element states that Colusa County is within the inundation zones of the following dams in the area: Lake Oroville, Lake Shasta, Whiskeytown Lake, Black Butte Lake, and East Park Reservoir.[26] However, review of the California Department of Water Resources' Division of Safety of Dams' Dam Breach Inundation Map indicates that the Project site is not within any potential dam inundation areas.[27] Therefore, there would be no impact.

e) The purpose of WDRs is to support the applicable water quality control plan for the basin in which a site is located. Thus, the WDRs that would be issued for the Project pursuant to Mitigation Measures HYD1, HYD2, and HYD3 would ensure that the Project is consistent with the Water Quality Control Plan for the Sacramento and San Joaquin River Basins. Thus, the Project would be consistent with and not conflict with or obstruct implementation of a water quality control plan.

The proposed groundwater use for the project is extremely small compared to the available groundwater supply and existing groundwater uses in the Colusa Subbasin. Groundwater demand would be further reduced by retention of stormwater, which would either be used to supplement process water to reduce groundwater demand or would be allowed to percolate to the subsurface to recharge the aquifer. Thus, the Project would not conflict with or obstruct sustainable groundwater management in the subbasin.

Because the Project would be consistent with applicable water quality control and sustainable groundwater management plans, there would be less than significant impacts.

Mitigation Measures: The following mitigation measures will reduce impacts on hydrology and water quality to a less than significant level:

12. **HYD1:** Prior to commencement of grading activities, CRC shall file a Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board and prepare a Construction Storm Water Pollution Prevention Plan (C-SWPPP) for the Project.

13. **HYD2:** Prior to commencement of grading activities, CRC shall file a Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board and prepare an Industrial Storm Water Pollution Prevention Plan (I-SWPPP) for the Project.

14. **HYD3:** Prior to operations, CRC shall prepare a Report of Waste Discharge (ROWD) and obtain a Waste Discharge Requirements (WDR) from the Central Valley Regional Water

[24] California Office of Emergency Management (OES). 2021. MyHazards. https://myhazards.caloes.ca.gov/. Accessed June.
[25] See Appendix G
[26] Colusa County. 2012. Safety Element of the 2030 General Plan. June.
[27] California Department of Water Resources. 2021. Dam Breach Inundation Map. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. June.

Quality Control Board for any discharges of industrial wastewater to aboveground wastewater storage ponds onsite.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
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?	**[ ]**	**[**x**]**	**[ ]**	**[ ]**

Impact Discussion:

a) The Project would involve redevelopment of an existing industrial site with a new industrial use. Therefore, the Project would not physically divide an established community. No impact.

b) The zoning designation for the Project site is Heavy Industrial (M-2) with an Industrial (I) land use designation. Heavy Manufacturing, Energy Generation for Off-Site Use, Energy Generation for On-Site Use, and Agricultural Processing Off-site Products (for the soil amendment co-product) are all permitted uses in the M-2 zone. A requirement for a Major Use Permit for the Project is triggered because the number of heavy truck trips would exceed 70 trips per day pursuant to the performance standard in Section 44-2.50.20(b) in the County Zoning Code for Industrial Zones. However, the proposed use of the site would result in less than half of the heavy truck trips and employee trips recently occurring from the property under operation of the Olam Tomato Processing Facility. Therefore, the Project would be consistent with the purpose and intent of the zone district as well as the land use designation.

The Project would be consistent with all County development standards for the Project site, in accordance with the County's Zoning Code. No modifications or variances are requested.

Finally, Appendix I contains a detailed evaluation of the Project's consistency with local plans and policies of Colusa County as well as the City of Williams. According to this analysis, with implementation of required mitigation measures for other issue areas, the Project would be consistent with all plans and policies. Therefore, with implementation of mitigation measures required for other issue areas, the Project would have a less than significant impact on County and City land use plans, policies, and regulations.

Mitigation Measures:

- See required mitigation measures for all other issue areas

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**
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?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Existing Setting:

According to California Department of Conservation's, Mineral Land Classification map, there are no Mineral Resource Zones located at or near the Project Site.[28] Also, according to Colusa County's Conservation Element of the 2030 General Plan, there are no locally important mineral resources in the Project area.[29]

Impact Discussion:

a-b) Due to the lack of mineral resources of State or local importance in the Project area, no impact would occur.

Mitigation Measures:
- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIII. NOISE – Would the project result in:				
a) Generation 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 standard of other agencies?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

[28] California Department of Conservation. 2021. Mineral Lands Classification Map. https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. June.
[29] Colusa County. 2012. Conservation Element of the 2030 General Plan. June.

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?	**[ ]**	**[ ]**	**[ ]**	**[**x**]**

Existing Setting: A Noise Impact Assessment was prepared for the Project by ECORP Consulting Inc. (Appendix J).

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, places of worship, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise. The nearest noise-sensitive receptor to the Project site is a residential property located across Frontage Road approximately 150 feet west of the Project's western boundary. There is another residential property, fronting Myers Road on the west side of I-5, located approximately 1,740 feet west of the Project site. The next-nearest residential property sits approximately 2,150 feet east of the Project site on Myers Road.

In order to quantify existing ambient noise levels in the Project area, ECORP conducted one long-term noise measurement, spanning 24-hours, between April 27 and April 28, 2021 near the northwest corner of the Project site. Additionally, five short-term measurements spanning 15 minutes each were conducted in the Project vicinity. The noise measurements are representative of typical existing noise exposure within and around the Project site. The average noise levels and sources of noise measured at each location are listed in Table 3-2 of the Noise Impact Assessment contained in Appendix J.

As shown in Table 3-2 (Appendix J), the long-term ambient recorded noise level adjacent to the northwest corner of the Project site was measured at a day/night noise level of 74.1 A-weighted decibels (dBA L_{dn}), a noise level indicative of very heavy traffic conditions, including heavy-duty truck traffic. Environmental noise levels are generally considered to be high when above 70 dBA L_{dn}. This is consistent with the observations of ECORP staff who noted higher noise conditions as a result of heavy-duty truck traffic and accelerating heavy-duty trucks on Frontage Road, as well as traffic on I-5.

Short-term ambient recorded noise levels in the Project vicinity ranged from 43.7 to 72.3 dBA L_{eq}. The most common noise in the Project vicinity is produced by automotive vehicles on County roadways and agricultural activities.

Impact Discussion:

a) Noise impacts associated with construction and operation of the Project are discussed below:

<u>Construction</u>

Onsite Construction Noise

Onsite construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During onsite construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest noise-sensitive receptor to the Project site is a residential property located across Frontage Road approximately 150 feet west of the Project's western boundary. There is another residence, fronting Myers Road on the west side of I-5, located approximately 1,740 feet west of the Project site. The next-nearest residence sits approximately 2,150 feet east of the Project site on Myers Road. However, it is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project site and at various distances from sensitive receptors. Therefore, this analysis employs Federal Transit Administration (FTA) guidance (Appendix J) for calculating construction noise, which recommends measuring construction noise produced by all construction equipment from the center of the Project site, which in this case is approximately 580 feet from the Project property line at the nearest. The County Code limits construction to the hours of 7:00 a.m. and 7:00 p.m. on Mondays through Fridays, and between the hours of 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays as long as the noise level at any point outside of the property plane of the Project does not exceed 86 dBA.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the construction process and compared against the construction-related noise level threshold of 86 dBA.

As shown in the Noise Impact Assessment report (Appendix J), no individual or cumulative pieces of construction equipment would exceed the 86 dBA County construction noise threshold during onsite Project construction activities. It is noted that construction noise was modeled on a worst-case scenario in which all pieces of construction equipment are operating at the same time and at the highest level of intensity. It is very unlikely that noise levels would reach those predicted in Table 5-1 of the Noise Impact Assessment report (Appendix J) at the Project boundary.

Offsite Construction Noise

In addition to onsite construction, the Project proposes interconnection to either PG&E's Williams 1101 12 kV distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station in order to export sale of electric power to PG&E. Both existing lines are located on the same power poles along Frontage Road running north to the PG&E

Williams Generating Station in Williams. It is assumed that PG&E will require reconductoring along this route and may require replacement of some or all of the power poles along this route.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors to proposed high voltage line reconductoring activities, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the construction process and compared against the County construction-related noise level threshold of 86 dBA. As previously stated, a portion of this proposed activity will occur within the City Limits of Williams; however, the City does not promulgate a numeric noise threshold standard for construction noise. Therefore, for the purpose of this analysis, all offsite construction noise is compared to the 86 dBA construction-related noise level threshold.

As shown in Table 5-2 of the Noise Impact Assessment report (Appendix J), no individual or cumulative pieces of construction equipment would exceed the 86 dBA County construction noise threshold during high voltage conductor stringing activities. It is noted that such noise was modeled on a worst-case scenario in which all pieces of equipment are operating at the same time and at the highest level of intensity.

Offsite Construction Worker and Material Haul Truck Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the time period that construction occurs. According to the Project proponent, the maximum number of construction workers traveling to and from the Project site on a single day would be 42. Assuming each worker arrives in their own vehicle and takes lunch offsite, 42 workers would generate approximately 168 daily traffic trips during each day of construction [42 workers x 4 trips = 168 daily trips]. The Project proponent has also identified the need to export up to 12,509 cubic yards of soil material. Accounting for a capacity of 16 cubic yards per haul truck, Project construction would require up to 1,564 one-way haul truck trips over the 14 months of construction [12,509 cubic yards ÷ 16 cubic yard truck capacity = 782 incoming material-loaded trucks and 782 outgoing empty trucks. 782 + 782 = 1,564 total haul truck trips]. Assuming an equal distribution of visiting haul truck trips over the 14-month construction period results in 6 haul truck trips daily. Therefore, Project construction would have the potential to generate an additional 174 daily traffic trips on Project vicinity roadways [168 worker trips + 6 haul truck trips = 174 total daily traffic trips].

According to the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013) (Appendix J), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). The majority of this construction-related traffic trips would access the Project via I-5 to Frontage Road and Project construction would not result in a long-term, consistent doubling of traffic on either of these facilities. As previously stated, the roadway segment on I-5 between Hahn Road and Husted Road, which traverses the Project area, has an average daily traffic count of 32,800 vehicles.[30] Therefore, the addition of Project construction generated traffic would not result in a

[30] Caltrans. 2020. Traffic Census Program: 2019 Traffic Volumes. https://dot.ca.gov/programs/traffic-operations/census

doubling of traffic on I-5. As identified in the Colusa County General Plan (2012) (Appendix J), Frontage Road is classified as a "Major Collector". Major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. Thus, the addition of 182 daily trips to the major collector, Frontage Road, would not result in a doubling of traffic.

As previously described, the Project proposes interconnection to PG&E's Williams Generating Station located on 5th Street within the City of Williams in order to export sale of electric power to PG&E. It is assumed that PG&E will require reconductoring along this route. This activity would occur along Frontage Road running north to the Williams City Limits where Frontage Road becomes 7th Street. According to the City of Williams General Plan (2012), 7th Street is the only designated Major Collector in Williams. As previously described, major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. The minimal daily trips associated with reconductoring would not result in a doubling of traffic on these roadways, and its contribution to existing traffic noise would not be perceptible.

For these reasons, the contribution to existing noise during Project construction, both onsite and offsite, would not be perceptible and would be less than significant.

Operation

Project Operational Offsite Traffic Noise

Project operation would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project area. As discussed above, the long-term ambient recorded noise level measured at the location between the northwest corner of the Project site and Frontage Road, and just north of the residential property on Frontage Road, was measured at 74.1 dBA L_{dn}, a noise level indicative of very heavy traffic conditions, including heavy-duty truck traffic. Per Colusa County General Plan Noise Element Policy N 1-5, where existing traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dBA L_{dn} increase in roadway noise levels would be considered significant.

The Project is anticipated to generate approximately 125 heavy-duty truck trips daily. Additionally, the Project would accommodate approximately 200 employee trips daily (the Project would maintain weekday staffing levels of 50 employees. Assuming each employee arrives in their own vehicle and takes lunch offsite, 50 employees would generate approximately 200 daily traffic trips [50 workers x 4 trips = 200 daily trips]). Thus, the Project is expected to generate 325 daily traffic trips during operations. Most of this operational traffic would access the Project site via I-5 to Frontage Road. However, it is expected that Myers Road would also be utilized in both directions. Table 18 shows the calculated offsite roadway noise levels under existing traffic levels compared to future traffic levels with operation of the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards promulgated by the County of Colusa. Specifically, a +1.5 dBA L_{dn} increase in roadway noise levels as a result of the Project would be considered significant. This level of

noise increase is considered significant since the long-term ambient recorded noise level measured at the Project vicinity is greater than 65 dBA L_{dn}.

Table 18. Existing Plus Project Conditions – Predicted Traffic Noise Levels[1]

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA L_{dn})	Exceed Standard?
		Existing Conditions	Existing + Project Conditions			
Interstate 5						
Between Hahn Road & Husted Road Exits	Agricultural & Residential	75.3 dBA	75.4 dBA	+0.1	>1.5	No
Frontage Road[2]						
Between Myers Road & Husted Road	Agricultural, Residential, & Industrial	74.1 dBA[3]	74.1 dBA	+0.0	>1.5	No
Myers Road[4]						
West of Frontage Road	Agricultural, Residential, & Industrial	54.7 dBA	55.4 dBA	+0.7	>1.5	No
East of Frontage Road	Agricultural & Residential	57.9 dBA	58.2 dBA	+0.3	>1.5	No

Source: Traffic noise levels were calculated by ECORP Consulting using the Federal Highway Administration (FHWA) roadway noise prediction model. Refer to Appendix J for traffic noise modeling assumptions and results.

Notes:

[1] 80 percent of all Project traffic is assumed to traverse both Frontage Road and I-5. 10 percent of all Project traffic is assumed to travel Myers Road, west of Frontage Road, and another 10 percent of all Project traffic is assumed to travel Myers Road, east of Frontage Road.

[2] While it is acknowledged that a portion of Project traffic may travel south on Frontage Road from the Project site, between Myers Road and the Hahn Road on-ramp, there are no land use receptors along this roadway segment and therefore Project traffic noise on this roadway segment was not analyzed.

[3] Existing noise levels at this roadway segment was determined by conducting a long-term noise measurement, spanning 24-hours, between April 27 and April 28, 2021 near the northwest corner of the Project site. This measurement was taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator.

[4] Existing traffic noise generated on Myers Road is based on traffic data derived from the County General Plan Environmental Impact Report (2011).

As shown in Table 18, no roadway segment would experience an increase of noise beyond the County significance standards as a result of the Project.

As previously described, the Project vicinity is characterized by its high noise conditions as a result of heavy-duty truck traffic and accelerating heavy-duty trucks on Frontage Road, as well as traffic on Interstate 5. The Project area is considered to experience ambient noise Category 1 by the American National Standards Institute, defined as “noisy commercial and industrial areas and very noisy residential areas”. The decibel scale is logarithmic, not linear; therefore, sound levels cannot be added or subtracted through ordinary arithmetic. For instance, two sound levels 10 dB apart differ in acoustic energy by a factor of 10, and when combining noise levels that

differ by more than 10 dBA, the lower noise value does not contribute to the total noise level.[31] Thus, it is for these reasons that while the Project would contribute 125 heavy-duty truck trips and approximately 200 employee trips daily to the roadways surrounding the Project site, particularly Frontage Road and I-5, the overall ambient noise environment is only slightly affected, and no roadway segment would experience an increase of noise beyond the County significance standards as a result of the Project.

Project Operations-Onsite Noise Sources

The primary onsite operational noise associated with the proposed Project would be manufacturing and shipping-related activity, such as trucks idling and maneuvering the site, stationary machinery, industrial shipping yard activities, and the operation of train cars on the onsite rail spur. The County of Colusa's stationary source noise regulations are contained in Policy N 1-1 of the Noise Element and Chapter 13, *Noise Regulations*, of the County Code (see Appendix J). The maximum exterior operational Project-generated noise as experienced at sensitive residential uses within a High Noise Traffic Corridor is 65 dBA L_{eq}.

Stationary source noise levels have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. At the time of prepare this Noise Impact Assessment, Project building size, orientation and specific location of truck loading docks and location of specific mechanical equipment was not available. As such, a worst-case analysis was performed. Specifically, inputted noise modeling parameters consisting of large area sources encompassing the majority of the Project site were employed. Several point sources were also included in order to provide a conservative analysis (Appendix J).

Noise propagation from onsite Project operations, as calculated using the SoundPLAN 3D noise model, is shown in Table 19, which identifies the predicted Project noise levels at three locations in the Project vicinity. Additionally, a noise contour graphic (Figure 3 of Appendix J) has been prepared to depict the predicted noise levels in the Project vicinity as a result of onsite Project operations.

Table 19. Modeled Operational Noise Levels

Site Location	Location	Modeled Operational Noise Attributed to the Project (L_{eq} dBA)	County Noise Standard for High Noise Traffic Corridor (dBA L_{eq})
1	Northern Project Property Line	61.2 dBA	*65 dBA*
2	Nearest Sensitive Receptor – Residence to the West of the Project, Across Frontage Road	64.8 dBA	*65 dBA*
3	South of Project Site 400 Feet	58.6 dBA	65 dBA

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Appendix I for noise modeling assumptions and results

[31] Caltrans. 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

As shown in Table 19, Project noise generated onsite would propagate to 64.8 dBA at the nearest sensitive receptor. It is noted that the SoundPLAN was used to model noise as a result of onsite activities on a worst-case basis. All noise producing sources on the Project site were modeled for noise as if occurring at the same time and at the highest activity level to produce noise levels at the level as those predicted.

As shown in Figure 3 of Appendix J, onsite noise generated on the Project site diminishes in power as it propagates outward from the site, generally reducing to less than 60 dBA before reaching the surrounding agricultural fields and industrial land use to the north.

No roadway segment would experience an increase of noise beyond the County significance standards and no aspect of Project onsite operations would surpass the County noise standard at the nearest sensitive receptor.

b) Vibration impacts associated with the Project are discussed below:

Construction

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors.

County General Plan Noise Element Action N 1-K requires that Project generated groundborne vibration during construction is calculated and evaluated against the significance criteria established by the FTA. Thus, the FTA[32] recommended standard of 94 vibration velocity level (VdB) with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. The nearest structures of concern to the Project site are industrial structures positioned approximately 85 feet from the northern property line.

Table 20 presents the expected Project related vibration levels at a conservative distance of 85 feet.

[32] FTA. 2018. Transit Noise and Vibration Impact Assessment.

Table 20. Project Construction Vibration Levels at 85 Feet

Receiver Vdb Levels[1]					Peak Vibration	Threshold	Exceed Threshold
Large Bulldozer/Caisson Drilling/Hoe Ram	Loaded Trucks	Jackhammer	Small Bulldozer/ Tractor	Vibratory Roller			
71.1	70.1	63.1	42.1	78.1	78.1	*94*	No

[1]*Based on the Vibration Source Levels of Construction Equipment included on Table 5-5 (FTA 2018).*

As shown, groundborne vibrations attenuate rapidly from the source due to geometric spreading and material damping. Geometric spreading occurs because the energy is radiated from the source and spreads over an increasingly large distance while material damping is a property of the friction loss which occurs during the passage of a vibration wave. As shown in Table 20, vibration as a result of construction activities would not exceed 94 Vdb at the nearest structure. Thus, Project construction would not exceed the County threshold and impacts would be less than significant.

Operations

The Project proposes to revitalize and use the existing rail spur on the Project site to ship products on the industrial railway that already operates along the western boundary of the site. Freight trains are a source of groundborne vibration. Passing freight train create vibration events that last approximately two minutes; however, the rail spur would be the only new source of vibration and the movement of rail cars on the spur would be considerably slower than a passing freight train.

Older, historic buildings often considered fragile are the predominate source of concern from rail-related vibration.[33] However, it is extremely rare for vibration from train operations to cause substantial or even minor cosmetic building damage (FTA 2018). The closest Project structure to the proposed rail spur would be the residence directly west of the Project site, across Frontage Road, at approximately 150 feet distant. According to the FTA (2018), groundborne vibration from heavy rail is common when there is less than 50 feet between the track and building foundations.

Groundborne vibration levels associated with freight rail traveling 50 miles per hour, at 150 feet distant, are summarized in Table 21.

[33] FTA. 2018. Transit Noise and Vibration Impact Assessment.

Table 21. Representative Vibration Source Levels for Freight Rail at 150 Feet	
Equipment	Receiver Vdb Levels at 150 Feet
Locomotive-Powered Freight Rail at 50 mph	75 Vdb

Source: FTA 2018

As shown in Table 21, the closest Project residential structure to the Project rail spur, positioned approximately 150 feet distant, would experience vibration levels of 75 Vdb if the Project rail cars on this spur were to travel at a rate of 50 miles per hour. This is below the FTA (2018) recommended standard of 94 VdB with respect to the prevention of structural damage for residential buildings, and it is noted that rail traffic on this spur would not travel at 50 miles per hour, and therefore the resultant Vdb would be substantially less.

The Project would not result in groundborne vibration at any offsite structure in excess of the County standard. Impacts would be less than significant.

c) The Project site is located outside of any airport land use plan. Furthermore, the Project site is located beyond two miles from any airport or airstrip. The Colusa County Airport is the closest public airport to the Project site and is located approximately eight miles to the northeast. There are also several private airstrips in Colusa County, the nearest being a gliderport in Williams approximately four miles north of the Project site and McCabe Ranch airfield approximately six miles south of the Project site. Thus, the ambient noise environment of the Project area is not heavily influenced by aircraft noise. Implementation of the proposed Project would not affect airport operations nor result in increased exposure of people working at or visiting the Project site to aircraft noise. There would be no impacts.

Mitigation Measures:

- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – 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)?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Impact Discussion:

Construction of the Proposed Project is expected to take 14 months to complete using approximately 42 construction workers. On weekdays, a maximum of 50 employees would be present onsite, comprising 10 employees each for four shifts, and 10 administrative staff. This number of staff is below the off-season staffing levels for the Olam Facility during its operation, and significantly lower than Olam's peak season staffing levels. It is expected that nearly all construction and operating personnel will come from the local and regional area. Therefore, the Proposed Project would not significantly increase the demand for housing and services in the area and would not result in the displacement of any people or existing housing. The impact of the Project on population and housing is expected to be minimal and less than significant.

Mitigation Measures:

- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
Fire protection?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
Police protection?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
Schools?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
Parks?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
Other public facilities?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Impact Discussion:

a) Construction of the Proposed Project is expected to take 14 months to complete using approximately 42 construction workers. On weekdays, a maximum of 50 employees would be present onsite, comprising 10 employees each for four shifts, and 10 administrative staff. On weekends, a maximum of 40 employees would occur onsite. This number of staff is below the off-season staffing levels for the Olam Facility during its operation, and significantly lower than Olam's peak season staffing levels. It is expected that nearly all construction and operating personnel will come from the local and regional area. Therefore, the Proposed Project would not significantly increase the demand for schools, parks, libraries, or other public facilities. The impact of the Project on these services is expected to be minimal and less than significant.

Security fencing and security systems would be utilized to control public access. It is not anticipated that the new facility would increase the requirement for protection by the County Sheriff's Department beyond service levels already provided to the area under the previous operation of the Olam facility. Therefore, the Project would not significantly affect police protection services.

Fire protection at the Project site would be served by the Williams Fire Protection Authority, a Special District operating in Colusa County. The Williams Fire Protection Authority is a Joint Powers Authority between the City of Williams and the Williams Fire Protection District of Colusa County. This firefighting organization is staffed on a 24 hour a day, seven day a week basis by a paid firefighter along with more than 40 trained volunteers and a duty officer. The Authority maintains an interagency agreement with CAL FIRE's Napa-Lake-Sonoma Unit which allows both entities to operate within State Responsibility Area (SRA) and Local Responsibility Area (LRA) lands as well.

The Project site is easily accessed from Myer Road, and is about 7 to 9 minutes from the nearest Williams Fire Protection Authority station to the north. The Project site is also approximately 8 to 9 minutes from the nearest Arbuckle Fire Department fire station to the south. The Project site provides all-weather access around the facility and adequate turn-around area for emergency apparatus. All surfaces are able to accommodate a 40,000 pound emergency vehicle. The Project's fire protection system, including a deluge system, would be designed in compliance with all County and California Fire Code requirements. A Hazardous Materials Business Plan would be prepared to comply with notification requirements regarding hazardous materials at the facility as required by the Williams Fire Protection Authority. With these design features and Hazardous Materials Business Plan, impacts to fire protection services can be considered to be less than significant (2030 Colusa County General Plan Safety Element).

Mitigation Measures:

- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVI. RECREATION				
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?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
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?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Existing Setting:

There are no parks, open spaces, or trails in the Project area.

Impact Discussion:

a-b) Construction of the Proposed Project is expected to take 14 months to complete using approximately 42 construction workers. On weekdays, a maximum of 50 employees would be present onsite, comprising 10 employees each for four shifts, and 10 administrative staff. On weekends, a maximum of 40 employees would occur onsite. This number of staff is below the off-season staffing levels for the Olam Facility during its operation, and significantly lower than Olam's peak season staffing levels. It is expected that nearly all construction and operating personnel will come from the local and regional area. Therefore, the Proposed Project would not significantly increase the demand for recreational areas. No recreational facilities would be affected by the Project. The impact of the Project on recreation is expected to be minimal and less than significant.

Mitigation Measures:

- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
d) Result in inadequate emergency access?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Existing Setting:

The Project facility would be accessed via I-5 exiting at the Husted Road/I-5 interchange and then heading south along Frontage Road or exiting at the Hahn Road/I-5 interchange and then heading north along Frontage Road. Access to the site for some workers and trucks could also occur from westbound or southbound Myer Road. As discussed above, in the Colusa County General Plan (2012), Frontage Road is classified as a Major Collector. Major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. Frontage Road is designated as a Class 3 bike route with a 3-foot shoulder in the Circulation Element of Colusa County's 2030 General Plan (2012).

In addition, according to the City of Williams General Plan (2012), 7th Street is also the only designated Major Collector in Williams, which would be utilized by construction equipment to reconductor line and replace poles for the PG&E Williams 1101 12kV line or Wadham 60 kV line. Within the City of Williams, Frontage Road, 4th Street, and Husted Road are identified as a designated truck routes per the Circulation Element of the City of Williams' General Plan (2012).

Access into and out of the Project facility for employees would be via an existing employee entrance controlled by a guard shack. No improvements are proposed for this entrance. Access to and from the Project facility for heavy trucks would be via a driveway along the far eastern boundary of the property that would be shared with the Wadham Energy Facility through a shared access easement. No improvements are proposed for this entrance from Myers Road or along the access driveway. A new paved, gated entrance into the Project facility would be installed in the far northeastern corner of the property for truck deliveries.

Impact Discussion:

a-b) Traffic impacts associated with construction and operation of the Project are discussed below:

<u>Construction</u>

Project construction would result in additional traffic on adjacent roadways over the time period that construction occurs. According to the Project proponent, the maximum number of construction workers traveling to and from the Project site on a single day would be 42. Assuming each worker arrives in their own vehicle and takes lunch offsite, 42 workers would

generate approximately 168 daily traffic trips during each day of construction [42 workers x 4 trips = 168 daily trips]. The Project proponent has also identified the need to export up to 12,509 cubic yards of soil material. Accounting for a capacity of 16 cubic yards per haul truck, Project construction would require up to 1,564 one-way haul truck trips over the 14 months of construction [12,509 cubic yards ÷ 16 cubic yard truck capacity = 782 incoming material-loaded trucks and 782 outgoing empty trucks. 782 + 782 = 1,564 total haul truck trips]. Assuming an equal distribution of visiting haul truck trips over the 14-month construction period results in 6 haul truck trips daily. Therefore, Project construction would have the potential to generate an additional 174 daily traffic trips on Project vicinity roadways [168 worker trips + 6 haul truck trips = 174 total daily traffic trips].

The majority of construction-related traffic trips would access the Project via I-5 to Frontage Road. The roadway segment on I-5 between Hahn Road and Husted Road, which traverses the Project area, has an average daily traffic count of 32,800 vehicles.[34] As identified in the Colusa County General Plan (2012), Frontage Road is classified as a Major Collector. Major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. Thus, the addition of 182 daily trips to the major collector, Frontage Road, during construction would have a less than significant impact on transportation along Frontage Road.

The Project proposes interconnection to PG&E's Williams Generating Station located on 5th Street within the City of Williams in order to export sale of electric power to PG&E. It is assumed that PG&E will require reconductoring along this route. This activity would occur along Frontage Road running north to the Williams City Limits where Frontage Road becomes 7th Street. According to the City of Williams General Plan (2012), 7th Street is the only designated Major Collector in Williams. As previously described, major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. The minimal daily trips associated with reconductoring would result in a less than significant contribution to existing traffic on roadways along the electrical line route.

Operation

The proposed facility is accessed via Myer Road and will operate 24 hours a day, 7 days a week. The proposed number of employees for the facility are less than half the number of employees commuting to and from the site during recent operation of the Olam facility. Specifically, a maximum of 50 employees per day would be onsite for the proposed operations as opposed to 100 employees during recent Olam operations during the off-season and up to 500 employees per day during the peak season. In addition, the 125 heavy truck trips per day under the Project would be less than half of the number of heavy truck trips utilized during recent operations of the Olam facility (300 daily trips per day). As a result, vehicle miles traveled from employees as well as from heavy truck trips are expected to be less than half that of recent industrial operations

[34] Caltrans. 2020. Traffic Census Program: 2019 Traffic Volumes. https://dot.ca.gov/programs/traffic-operations/census

at the site. Therefore, impacts would be less than significant consistent with Section 15064.3(b)(1) of the CEQA Guidelines.

c-d) Traffic safety impacts associated with construction and operation of the Project are discussed below:

Construction

As discussed above, in the Colusa County General Plan (2012), Frontage Road is classified as a Major Collector. Major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. In addition, according to the City of Williams General Plan (2012), 7th Street is also the only designated Major Collector in Williams, which would be utilized by construction equipment to reconductor line and replace poles for the PG&E Williams 1101 12kV line or Wadham 60 kV line. Within the City of Williams, Frontage Road, 4th Street, and Husted Road are identified as a designated truck routes per the Circulation Element of the City of Williams' General Plan (2012). Frontage Road is designated as a Class 3 bike route with a 3-foot shoulder in the Circulation Element of Colusa County's 2030 General Plan (2012). The Olam facility has operated in the area since the 1980s with approximately 300 heavy truck trips per day in operation without significant effects on traffic safety. Therefore, the 182 truck trips per day associated with construction of the Project is not expected to result in a significant safety impact on area roadways.

Operation

As identified in the Colusa County General Plan (2012), Frontage Road is classified as a "Major Collector". Major collector roadways are high-capacity facilities, just below major arterials on the road hierarchy of traffic flow and speed. The primary function of a major collector road is to deliver traffic from minor collector roads to arterials and freeways at the highest level of service possible. According to the City of Williams General Plan (2012), 7th Street is also the only designated Major Collector in Williams. Within the City of Williams, Frontage Road, 4th Street, and Husted Road are identified as a designated truck routes per the Circulation Element of the City of Williams' General Plan (2012). The Olam facility has operated in the area since the 1980s without significant effects on traffic safety. Since the Project would result in less than half the number of employee and heavy truck trips, the Project is not expected to result in a significant safety impact on area roadways.

Mitigation Measures:

- No mitigation required

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

Impact Discussion:

On July 27, 2021, Colusa County Community Development Department sent six different tribes a Notification of Consultation Opportunity pursuant to Public Resources Code §21080.3.1. These tribes were Cachil Dehe Band of Wintun Indians of the Colusa Indian Community, Yocha Dehe Wintun Nation, Cortina Rancheria – Kletsel Dehe Band of Wintun Indians, Estom Yumeka Maidu Tribe of the Enterprise Rancheria, and Grindstone Rancheria of Wintun-Wailaki, Paskenta Band of Nomlaki Indians. These tribes were identified through the Native American Heritage Commission and/or previously requested consultation. No request for consultation was received.

Mitigation Measures:

Please refer to the Cultural Resource analysis under Section V. CULTURAL RESOURCES for impact discussion and mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS – 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?	**[ ]**	**[ ]**	**[ ]**	**[x]**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	**[ ]**	**[ ]**	**[x]**	**[ ]**
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**[ ]**	**[ ]**	**[ ]**	**[x]**
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	**[ ]**	**[ ]**	**[x]**	**[ ]**
e) Comply with federal, state, and local management and reduction statutes and regulation related to solid waste?	**[ ]**	**[ ]**	**[x]**	**[ ]**

Impact Discussion:

a,c) An onsite existing 1,500-gallon septic tank and leach field is located on the east side of the site under the existing gravel parking area for disposal of domestic wastewater. Use of this septic system is proposed for the new CRC Williams facility for non-process (domestic) wastewater disposal. The total projected domestic wastewater volumes generated from the facility would be similar to, or less than, Olam's past use of the facility. Therefore, a new or expanded septic system is not anticipated to be required for the Project. There would be no impact.

b) There are no public water systems that serve the Project site, or that are located within more than one mile of the Project site. The Project would provide its own water needs through existing onsite groundwater wells.

Due to the acreage of the proposed new facility, the Project meets the definition of "project" under Water Code Section 10912(a) and therefore, is subject to a Water Supply Assessment (WSA) pursuant to Senate Bill 610 and CEQA. A WSA was prepared for the Project by ECORP Consulting Inc. (Appendix H). The purpose of the assessment was to determine if available water supplies are sufficient to serve the demand generated by the Project, as well as the

reasonably foreseeable demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions.

As described above under Hydrology and Water Quality, the water demand for the proposed Project will consist of water needed for dust control, industrial process supply, and for employee potable uses. The ongoing water demand over the next 20 years will be approximately 1,025 acre-feet per year for all uses.

Evaluation of conditions in the groundwater basin indicates that the sustainable yield is anticipated to increase from approximately 500,000 acre-feet per year currently to 523,000 acre-feet per year in 10 years and 551,000 acre-feet per year in 50 years. The potential net reductions in groundwater storage of 3,000 acre-feet per year in 10 years and 7,000 acre-feet per year in 50 years are nominal compared to the total volume of groundwater in storage, estimated to range from 26 million acre-feet to 140 million acre-feet. Evaluation of groundwater levels during wet and dry periods demonstrates that the groundwater elevation, and thus the volume of water in storage, rebounds after dry climatic cycles. The available groundwater data do not indicate any significant potential that current practices and the incremental additional water demand from the Project would lead to any undesirable results, as defined in Sustainable Groundwater Management Act (SGMA). According to the draft Groundwater Sustainability Plan (GSP) for the Colusa Subbasin of the Sacramento Valley Groundwater Basin (Colusa GSA and Glenn GSA, 2021)[35], sustainable basin operation is expected to be achievable under current and future scenarios. Therefore, there will be sufficient water available for the Project during single dry year and multiple dry year periods over at least the next 20 years (see Appendix H). As a result, Project impacts on water supply would be less than significant.

d-e) Solids generated from the process would be used to create a soil amendment co-product for beneficial reuse for agricultural purposes. Municipal solid waste generated by employees would be less than that generated during operation of the Olam facility. Finally, Olam is responsible for decommissioning and the demolition of facilities that would not be utilized by CRC, therefore, demolition waste generated by CRC would be minimal. In summary, solid waste impacts would be less than significant.

Mitigation Measures:

- No mitigation required

[35] Colusa Groundwater Sustainability Agency (GSA) and Glenn GSA, 2021, Groundwater Sustainability Plan, Draft Report, April 2021, https://colusagroundwater.org/projects/groundwater-sustainability-plan/, accessed May 18, 2021.

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

Existing Setting:

The California Governor's Office of Emergency Services (OES) MyHazards Page does not list the Project site in a CalFIRE designated State Responsibility Area (SRA)[36] nor in a medium, high, or very high fire hazard zone within the Local Responsibility Area.[37]

Impact Discussion:

a-d) The Project is not located in a CAL FIRE designated State Responsibility Area or on lands classified as very high fire hazard severity zone. Due to the industrial nature of the facility and agricultural uses in the surrounding lands, wildfire risk could be considered low to very low with minimal potential to exacerbate wildfire risks and accompanying impacts.

The construction and operation of Project would comply with the California Fire Code as well as the County's building code. Therefore, the Project would not impair the current Colusa County Local Hazard Mitigation Plan Update.[38]

[36] California Office of Emergency Management (OES). 2021. MyHazards. https://myhazards.caloes.ca.gov/. Accessed June.
[37] Office of the State Fire Marshall (OSFM). 2021. Home Page with Links to Fire Hazard Severity Zone (FHSZ) Maps, State Responsibility Areas (SRA) Maps, and Local Responsibility Areas (LRA) Maps. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. June.
[38] Colusa County. 2018. *Local Hazard Mitigation Plan Update*. December.

Mitigation Measures:

- No mitigation required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
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?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	**[ ]**	**[ ]**	**[**x**]**	**[ ]**

Impact Discussion:

a-c) Any potential impacts from the Proposed Project are less than significant or are less than significant with mitigation incorporation as described above.

In addition, the following beneficial effects of the Project on the environment include:

- Overall reduction of greenhouse gases due to use in electricity generation and concomitant reduction in electricity generation via conventional natural gas power generation systems, reduced off-site transportation of biomass to alternative disposal sites, reduced open burning of biomass, and sequestered carbon dioxide in biomass;
- Reduction in PM_{10} emissions due to reduction of open burning of biomass;
- Reduction of mobile emissions, particularly NOx due to reduction in truck traffic to alternative disposal sites for biomass; and,

- Use of state-of-the-art electricity generation and emissions control equipment in controlling air emissions.

As a result, and because potential significant impacts can be reduced to less than significant levels by implementation of mitigation measures as part of the Project, the Project would not have a considerable contribution to cumulative impacts on the environment or result in substantial adverse effects on human beings or the environment.

ADDITIONAL CHECKLIST SOURCES

1. Colusa County General Plan (2012)
2. Colusa County Zoning Ordinance.
3. Housing Element (Colusa County General Plan).
4. Seismic Safety Element (Colusa County General Plan).
5. Safety Element (Colusa County General Plan).
6. Noise Element (Colusa County General Plan).
7. Scenic Highways Element (Colusa County General Plan).
8. Conservation Element (Colusa County General Plan).
9. Open Space Element (Colusa County General Plan).
10. Community Services Element (Colusa County General Plan).
11. Circulation Element (Colusa County General Plan).
12. Specific Project Review and Site Investigation by Staff.
13. Additional Source Documentation as noted the Initial Study

NOTE: All of the above listed Checklist sources are on file at the Colusa County Department of Planning & Building and Department of Public Works. Staff is available to assist you in checking any references.

LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
APNs	Assessor Parcel Numbers
AB	Assembly Bill
AC	alternate current
afy	Acre feet per year
APE	Area of Potential Effects
AQAP	Air Quality Attainment Plan
ASME	American Society of Mechanical Engineers
ASF	Age Sensitivity Factor
ASTM	American Society of Testing and Materials
ATCM	Airborne Toxics Control Measure
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BCC	Birds of Conservation Concern
BERD	Built Environment Resource Directory
bgs	below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
BO	Biological Opinion
BP	before present
BRA	Biological Resources Assessment
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAISO	California Independent System Operator
CalARP	California Accidental Release Program
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARI	California Aquatic Resources Inventory
CBC	California Building Code
CCAA	California Clean Air Act
CCAPCD	Colusa County Air Pollution Control District
CCR	California Code of Regulations
CCTS	Central California Taxonomic System
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CHRIS	California Historical Resources Information System
CRU	carbon recovery unit
CNDDB	California Natural Diversity Database

LIST OF ACRONYMS AND ABBREVIATIONS

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
C-SWPPP	Construction Storm Water Pollution Prevention Plan
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yard
dB	decibel
dBA	decibel is A-weighted
DC	direct current
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DPS	Distinct Population Segment
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EMFAC	Emission Factor Model
EO	Executive Order
EPS	Emissions Performance Standard
ESA	Endangered Species Act
ESP	Electrostatic Precipitator
ESU	Evolutionarily Significant Unit
EV	electric vehicle
FAA	Federal Aviation Administration
FAH	Fraction of Time at Home
FAR	Floor Area Ratio
FEMA	Flood Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
GLCs	Ground Level Concentrations
GLO	General Land Office
gpm	gallons per minute
GPS	Global Positioning System
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HAP	Hazardous Air Pollutant
HCP	Habitat Conservation Plan
HDR	High Density Residential
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
HRSG	heat recovery steam generator

LIST OF ACRONYMS AND ABBREVIATIONS

Hz	Hertz
I-5	Interstate 5
IEPR	Integrated Energy Policy Report
I-SWPPP	Industrial Storm Water Pollution Prevention Plan
ITP	Incidental Take Permit
kV	kilovolt
kWh	kilowatt-Hours
lbs	pounds
lbs/day	pounds per day
L_{dn}	Day/Night Noise Level
L_{eq}	Equivalent Noise Level
LRA	Local Responsibility Area
LSA	Lake or Streambed Alteration
M-2	Heavy Industrial zone
MBTA	Migratory Bird Treaty Act
MCC	Motor Control Center
MEIR	Maximumly Exposed Individual Resident
MEIW	Maximumly Exposed Individual Worker
MLD	Most Likely Descendant
MLRA	Major Land Resource Area
MRP	Monitoring and Reporting Program
MSAT	Mobile Source Air Toxic
msl	mean sea level
MW	megawatt
MWh	megawatt Hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
NWIC	Northwest Information Center
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation

LIST OF ACRONYMS AND ABBREVIATIONS

OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PG&E	Pacific Gas and Electric
$PM_{2.5}$	particulate Matter under 2.5 microns
PM_{10}	particulate Matter under 10 microns
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PTE	Potential to Emit
REL	Reference Exposure Level
RMP	Risk Management Plan
RMS	root mean square
ROGs	reactive organic gases
ROWD	Report of Waste Discharge
RPA	Registered Professional Archaeologist
RPS	Renewable Portfolio Standards
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCR	Selective Catalytic Reduction
sf	square foot
SGMA	Sustainable Groundwater Management Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SPCC	Spill Prevention Control and Countermeasures
SO2	sulfur dioxide
SOx	sulfur oxides
SPRR	Southern Pacific Railroad
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
USACE	U.S. Army Corps of Engineers
UPRR	Union Pacific Railroad
USC	U.S. Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VdB	vibration decibel level
VELB	Valley elderberry longhorn beetle
VOCs	volatile organic compounds (also known as ROGs)
WBWG	Western Bat Working Group
WDR	Waste Discharge Requirement

LIST OF ACRONYMS AND ABBREVIATIONS

WEAL	Western Electro-Acoustic Laboratory, Inc.
WSA	Water Supply Assessment

Appendices

Appendix A: Assessor’s Parcel Map

Appendix B:
- B1 - Emissions Assessment
- B2 - Health Risk Assessment (HRA)

Appendix C: Biological Resources Assessment Report

Appendix D: Energy Impact Analysis

Appendix E: Risk Management Plan (RMP)

Appendix F: Phase I Environmental Site Assessment (ESA)

Appendix G: Drainage, Hydrology, and Water Quality

Analysis Report

Appendix H: Water Supply Assessment (WSA)

Appendix I: Consistency with Local Plans and Policies

Appendix J: Noise Impact Assessment

Appendix K: Plans