REVISED ENVIRONMENTAL INITIAL STUDY & MITIGATED NEGATIVE DECLARATION

Zone Amendment 22-0008 and Use Permit 22-0002
(Bar Over Heart Enterprises, LLC)

July 21, 2023
Revised September 21, 2023

ENVIRONMENTAL INITIAL STUDY &
MITIGATED NEGATIVE DECLARATION
WITH
References and Documentation

Prepared by
SHASTA COUNTY DEPARTMENT OF RESOURCE MANAGEMENT
PLANNING DIVISION
1855 Placer Street, Suite 103
Redding, California 96001

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INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

BURNEY BIOENERGY PROJECT

1.0 PROJECT INFORMATION

Project Title: Burney Bioenergy Project (Zone Amendment 22-0008 and Use Permit 22-0002)

Lead Agency/Contact Lio Salazar, Planning Division Manager
Shasta County Department of Resource Management
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001

Project Location: Black Ranch Road, Burney, CA
Assessor's Parcel Number (APN) 028-370-028, APN 030-390-070, and a portion of APN 030-390-066

Applicant: Doug Lindgren
Bar Over Heart Enterprises, LLC
21250 Black Ranch Road
Burney, CA 96013

Consultant: VESTRA Resources, Inc.
5300 Aviation Drive
Redding, CA 96002

General Plan Designation: Agricultural Croplands (A-C)
Industrial (I)

Zoning: U (Unclassified)
M-L-DR (Light Industrial-Design Review)

Description of the Project: A zone amendment to change the Light-Industrial combined with Design Review district (M-L-DR) zone district to the General Industrial combined with Design Review district (M-DR) zone district for an approximately 55-acre portion of an approximately 65-acre project site and a use permit for the development of a 5-megawatt bioenergy facility, small specialty sawmill, dry kins, chipping and grinding operation, firewood sales, outdoor storage and office, and exceedance of the maximum structural height standard of 45 feet for U zoned parcels with an A-C General Plan designation.

Surrounding Land Uses and Setting: The project site is located north of State Route (SR) 299 between the unincorporated communities of Burney and Johnson Park. The project site is east of Black Ranch Road and includes the southeast portion of Assessor's Parcel Number (APN) 030-390-066 and APNs 028-370-028 and 030-390-070 in their entirety. The General Plan designations for the

project site and adjacent properties are shown on Figure 2. The General Plan designations for the surrounding land uses include Agricultural Croplands (A-C), Public Facility (PF), Industrial (I), Suburban Residential (SR), and Commercial (C). Urban Residential (UR(6)) properties are located southwest of the project site. The zoning of the project site and adjacent properties is included on Figure 3.

The land west of the project site across Black Ranch Road includes undeveloped agricultural grazing land and a Pacific Gas & Electric Company (PG&E) facility. The Burney Wastewater Treatment Plant, Burney Disposal Transfer Station and Recycling Center, and a commercial Christmas tree business are located north of the project site. The property east of the project on the opposite side of SR-299 is undeveloped timberland. The properties south of the project site include commercial buildings and residences within the community of Burney.

The southern portion of the project site was formerly a rail yard for the McCloud River Railroad. The project site has been used as a storage yard for material for the nearby McCloud River Railroad line in the past as well as a storage yard for pipe for a planned natural gas pipeline. More recently, the project site has been used for loading wood chips and agricultural projects. The project site contains several buildings from the former McCloud River Railroad rail yard including a small engine house, section house, and headquarters office. A portion of the former McCloud River Railroad line runs along the eastern boundary of the project site, which was converted to a recreational trail (Great Shasta Rail Trail) open to the public in 2015.

The rest of the project site is undeveloped with the exception of several dirt roads. Portions of the project site have been cleared of trees and contain only shrubs and grasses. The northern portion of the project site consists of forest as well as the area between the Great Shasta Rail Trail and SR-299.

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

Shasta County Department of Resource Management, Air Quality Management District
Shasta County Department of Resource Management, Building Division
State of California, Regional Water Quality Control Board
State of California, Department of Forestry and Fire Protection
State of California, Department of Resources Recycling and Recovery

Environmental Factors Potentially Affected:

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

☐ Aesthetics	☐ Agriculture / Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service System	☐ 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.
- ☒ 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 NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Copies of the Initial Study and related materials and documentation may be obtained at the Planning Division of the Department of Resource Management, 1855 Placer Street, Suite 103, Redding, CA 96001. Contact: Lio Salazar, Planning Division Manager, (530) 225-5532.

REVISIONS

In response to comments received (see attached letter), revisions have been made to sections III. Air Quality, IV. Biological Resources, IX. Hazards and Hazardous Materials, XIII. Noise, and XX. Wildfire; additionally, mitigation measure MM BIO-2 has been revised to account for a plant survey having been completed for the project site. Revisions are denoted by ~~strikethrough~~ and underline. Pursuant to State CEQA Guidelines sections 15073.5 and 15074.1, recirculation of this document is not required since the revisions are not substantial and revised mitigation measure MM BIO-2 is equivalent in mitigating or avoiding potential impacts from the project on special status plant species and will not cause any potentially significant effects on the environment.

Lio Salazar, AICP
Planning Division Manager

9/21/23
Date

Paul A. Hellman
Director of Resource Management

9/21/23
Date

2.0 PROJECT DESCRIPTION

2.1 Entitlements Sought

The applicant is seeking approval of a zone amendment from the Light-Industrial zone district combined with the Design Review zone district (M-L-DR) to the General Industrial combined with the Design Review (M-DR) zone district for an approximately 55-acre portion of an approximately 65-acre project site and approval of a use permit for a bioenergy facility and sawmill, and exceedance of the maximum structural height standard of 45 feet for U zoned parcels with an A-C General Plan designation. The request to exceed the height standard is for the proposed building that would house the bioenergy facility which would be 79.2 feet tall with a stack extending to a height of 115 feet.

2.2 Introduction

The project includes a 5-megawatt (MW) bioenergy facility, small specialty sawmill, dry kilns, chipping and grinding operation, firewood sales, and office. The project is proposed by Tubit Enterprises with support for the bioenergy facility from British American Energy (BAE). The facility will process biomass using gasification technology and operate under the BioMAT (SB 1122) program which will secure a twenty-year Power Purchase Agreement (PPA) with PG&E who will purchase 3 MW of electricity. The project proponent is currently in negotiations to service other nearby operations, such as the Burney Water District, with the remaining 2 MW and is considering developing other onsite co-located businesses that can use heat or the power generated. The project will utilize sustainably harvested, forest-sourced biomass feedstock from nearby regions to supply its operations. The facility will be using a gasification-fed boiler system to convert the woody biomass to electricity and a ceramic catalytic filter system to regulate its air emissions.

In addition to the bioenergy facility, the project includes a wood product operation. The operation will include a small sawmill and dry kilns (fed by energy from the bioenergy plant) that will produce specialty softwood products (lumber, fence posts, etc.). Up to 104,000 tons of logs will be received annually. The logs will be scaled and inspected upon receipt. Logs that do not meet board feet requirements, have rot, or are crooked will be routed to the cull pile and will be processed into firewood or ground for feedstock. Logs that meet lumber criteria will be stored in the log deck prior to being processed in the sawmill.

The sawmill will process up to 400 tons of lumber each operational day. Lumber will be dried in the kilns which will have the capacity to dry up to 250,000 board-feet (BF) at one time. Throughput will depend on species since drying time of each species varies. Up to 18,250,000 BF will be dried in the kiln annually. After drying, the lumber will be further processed in the mill. Finished lumber will be stored in the lumber storage area. Sawdust from the mill will be mixed into the feedstock pile for the bioenergy facility and scrap wood from the sawmill will be processed in the grinder for bioenergy facility feedstock.

Firewood processing and grinding of material to produce landscape products will also occur. The operation will accept residential fuel reduction materials including trees, brush, branches, clippings, needles, and leaves from the public. Public drop-off hours for fuel reduction material will correspond with the hours of the adjacent Burney Disposal Transfer Station (currently 8:00 a.m. to 4:30 p.m. on

Mondays, Wednesdays, and Saturdays). Up to 40 loads of material will be received each of these days (up to 120 loads per week). Up to 360 cubic yards of material may be received from the public each week. This material will be processed in the grinder and be used as feedstock for the bioenergy facility when feasible. Material not suitable for feedstock (estimated to be 5 percent of the total volume) will be used to create landscape materials or diverted to the Burney Disposal Transfer Station.

The goals of the project are to expand capacity for non-merchantable forest residuals from forest health improvement projects in the region to be processed into renewable electricity and wood products. With wildfire becoming a more frequent and more destructive threat, providing more outlets for removing fuel loads (woody biomass) will allow economical incentivization for forest health projects to remove low-value biomass while providing an alternative to pile burning.

2.3 Location and Site Plan

The project site is located on the east side of Black Ranch Road northwest of the unincorporated community of Burney and approximately 0.5 miles north of the intersection of Black Ranch Road and SR-299. The project site includes the southeast portion of APN 030-390-066 and APNs 028-370-028 and 030-390-070. The bioenergy facility will be located on an approximately 10-acre portion of APN 030-390-066. A portion of the feedstock pile will also be located on this parcel. The remainder of the feedstock pile, kilns, planer grinder, sawmill, landscape materials area, firewood storage, log storage lumber storage, cull pile and related support facilities will be located on APNs 028-370-028 and 030-390-070. The proposed site plan for the project is included on Figure 5.

Feedstock storage piles will be managed in accordance with California Fire Code requirements for storage of feedstock (Section 2802). The feedstock piles will not exceed 25 feet in height, 150 feet in width, and 250 feet in length. The feedstock pile will be located on a paved surface. Piles will be separated by adjacent piles by approved fire apparatus access roads. The internal temperature of static piles will be monitored and recorded weekly. Portable fire extinguishers shall be provided on all vehicles and equipment operating on piles and at all processing equipment. Equipment will be available for moving wood chips, hogged material, wood fines, and raw product during fire-fighting operations.

The bioenergy facility will be located on a concrete slab and housed within an enclosed structure to protect the conversion system and associated equipment from the elements and to reduce noise. The building will be constructed of a composite aluminum/steel laminate standard cladding with insulation. The building will have automatic closing doors with high-density plastic sheeting to cover the doors when open. The internal combustion engine generator will be housed in an enclosed structure within the main energy facility building for noise and safety considerations. The turbine will be located inside a sound-proof, attenuated, ventilated room within the main building. The proposed 49,140-square-foot building housing the bioenergy facility will be 79.2 feet tall with the stack extending to a height of 115 feet.

The dry kiln buildings will be east of the bioenergy building. Four track-loading kilns will be located side-by-side in this location. Each kiln will be 84 feet long and 35 feet wide. The bioenergy facility will supply heat for the dry kiln buildings via overhead piping. The 5,000-square-foot planer building will be located east of the kilns. The 20,000-square-foot sawmill building will be located south of the bioenergy facility building. The planer and sawmill buildings will be 18 feet tall to the eaves. The

grinder and feedstock (fuel) pile will be located between the sawmill and bioenergy facility buildings. Firewood, cull log, log, and lumber storage will occur on the remainder of the project site. See Figure 5.

2.4 Bioenergy Facility Process

The bioenergy facility will use a gasification and boiler system to convert woody biomass to electricity. The facility will utilize approximately 45,000 tons of woody biomass per year, which correlates to a rate of 5,550 kilograms per hour. A Process Flow Diagram for the facility is included as Figure 6.

Gasification is the thermochemical conversion of woody biomass into a gas under controlled temperature and oxygen conditions. Woody biomass materials are not "burned" in a gasification system. Biomass feedstock is converted to a high calorific value wood gas (gas) in the gasifier by using clean, recirculated flue gases, and the gas is then cleaned further with selective noncatalytic reduction (SNCR) in a thermal oxidizer to create a clean, green source of heat. This then heats the boiler system and its energy is exchanged for high-quality steam, then the cooled gas flow is further filtered through a Ceramic Catalytic Bag-Filter (SCR) which significantly reduces air emissions.

The high-quality steam is used in a vacuum-condensing turbine to produce clean and efficient power. The turbine condenses the steam to water via an air-cooled condenser which then returns the cooled water to the boiler island to be reheated by the green wood gas once again into high-quality steam, which then repeats this clean, closed cycle.

Cooling the gas and maintaining appropriate engine temperatures will be required and the facility will use chillers and cooling towers as necessary. A cooling tower system will be located outside of the main energy facility building to help maintain appropriate engine temperatures. Blowdown water produced by the cooling process will be disposed of at the adjacent Burney Water District wastewater treatment plant.

Electricity produced by the facility will be sold to PG&E and nearby property owners. Transmission of electricity would be via pole mounted switchgear. Ash left over from the gasification process will be transported for use off-site (agriculture, roadbuilding, etc.) or disposal.

2.5 Equipment

Bioenergy facility equipment will include generators, hoppers, conveyers, boiler, turbine, generator, economizer, condenser, ceramic bag filter, fan, and steam air-cooling system. All the equipment will be located inside of a building except for the draft fan on the boiler.

In addition to the biomass facility equipment, the following equipment is anticipated to be used for operations including wood product finishing and production:

- Loader for feedstock handling
- Grinder to produce feedstock onsite
- Forklift loading and unloading boards from trucks and storage
- Two heel boom log loaders decking logs for firewood and/or feedstock production
- Two rubber-tire wheel loaders to move firewood and feedstock

- Water truck to water firewood and work areas
- Firewood processer (Cord King)
- Sawmill (inside building)

2.6 Feedstock Source and Procurement

The project site is strategically located near the intersection of two major highways (SR-299 and SR-89) and is surrounded by a diversity of private and public timberlands. The facility will utilize approximately 55,000 bone dry tons (BDT) of woody biomass per year to convert to electricity purchased by PG&E and others. A feedstock supply study, conducted in 2016 by the Watershed Research and Training Center in Hayfork, California, identified an annual feedstock supply available of 363,000 BDT of woody biomass harvested from public and private lands within a 50-mile radius of the project site. This availability is an 11.3:1 feedstock supply ratio, confirming significant availability of forest feedstock. Feedstock for the facility will be provided by Tubit Enterprises, Inc. (Tubit), a logging and chipping company which has operated in the region for more than 20 years.

Tubit is uniquely positioned to secure feedstock from a variety of local sources and other sources in northern California. The company generally logs an average of 10 million BF and 150,000 BDT each year from private industrial and U.S. Forest Service timberlands, with operations generally occurring between February and November. Tubit has more than 70,000 green tons under contract in 2021 (approximately 35,000 BDT), which will satisfy the PG&E feedstock requirements.

The wood feedstock supply (WFS) will be derived from forest conifer trees and/or juniper trees including logs, tree boles and limbs, and incidental quantities of hardwood or woody brush species. Any other type of material is expressly excluded. A small portion of the feedstock for the facility will consist of suitable fuel reduction material dropped off by the public that will be ground onsite. Feedstock will also be supplied from the sawmilling operations onsite. WFS will be processed by a "whole tree" mechanical knife, drum chipper, and Rotochopper grinder with Quadco Hotsaw teeth on rotor. Feedstock will consist only of pieces less than six inches (6") in every dimension. Ninety-nine percent (99%) by weight of each delivery will be pieces less than three inches (3") in every dimension. Fine material (less than ½ inch in its largest dimension) shall comprise no more than three percent (3%) of each delivery by weight. The WFS shall be of size, nature, and consistency compatible with the buyer's WFS receiving, handling, and combustion equipment. Additionally, WFS will be free of foreign materials including, but not limited to, earth, stone, plastic, glass, metal, paper, rubber, non-combustible materials, paint, and any hazardous or toxic substances as defined by law and regulation. Processing of feedstock will occur in the center of the project site. See Figure 5.

2.7 Schedule and Hours of Operation

Construction of the bioenergy facility and sawmill support operations is anticipated to occur over 18 months to two years. Once construction is completed, the biomass plant will operate 24 hours per day, 7 days per week. Approximately 12 employees will be onsite 7 days per week, working 12-hour shifts. Feedstock truck deliveries will occur Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. Movement of feedstock from the fuel storage pile to the bioenergy facility using a loader will occur as needed during operational hours.

Wood-product finishing and production operations will occur at the project site from 6:00 a.m. to 4:00 p.m. on Monday through Saturday. Public drop-off hours of fuel reduction material will correspond with the public hours of the Burney Disposal Transfer Station (currently 8:00 a.m. to 4:30 p.m. on Mondays, Wednesdays, and Saturdays). The dry kilns for the sawmill will operate overnight when drying is occurring; however, loading and unloading will occur during the operational hours listed above.

2.8 Traffic

Traffic related to the bioenergy facility will consist of feedstock delivery trucks, employees, and public drop-off of materials. The facility will require 55,000 BDT of woody biomass per year. Assuming each truck will transport approximately 20 tons of feedstock, an estimated 2,640 truckloads of feedstock per year are anticipated to be required for the facility. With feedstock receipt occurring five days per week, an average of 10 feedstock trucks will arrive at the facility each day. An additional truck could be required each day to transport ash from the site, leave for repairs, or transport supplies or fuel. A maximum of 50 trucks per day will deliver feedstock to the facility in circumstances of forest fire recovery or log market volatility. An average of 10 employees will enter and exit the bioenergy facility each day.

Additional traffic will be generated by wood product operations. The operations will include three to six employees entering and exiting the project site each operating day. Up to 15 trucks per day (Monday through Friday) will deliver logs to the project site for the sawmill operation. Each log truck is anticipated to carry 40 tons of logs. An average of four pickup-truck loads of firewood from the site will be delivered to customers each day. Up to 40 pickup-truck loads are anticipated to be received on Mondays, Wednesdays, and Saturdays during public drop-off of fuel reduction material.

The majority of traffic to and from the facility will use Black Ranch Road south of the project site to connect to SR-299. Feedstock trucks will use Black Ranch Road north of the project site only if there is a feedstock-supplying project located north of the project site on Black Ranch Road. This includes projects off of Black Ranch Road as well as roads intersecting Black Ranch Road north of the project site and south of Clark Creek Road.

The County and Caltrans have recommended minor access improvements on Black Ranch Road, including construction of paved encroachments at the proposed access points on Black Ranch Road and minor shoulder widening at the intersection of Black Ranch Road and SR-299 to accommodate turning movements at that intersection.

2.9 Water Use and Wastewater Generation

The bioenergy facility is anticipated to use approximately 211 to 264 gallons of water per hour during operation, amounting to 6,336 gallons per day at peak operation. Water will also be used for dust suppression onsite, in the dry kiln building, as lubrication for the sawmill, and possibly for sprinkling of log decks. Up to 10,000 gallons of water per day will be required for wood-product operations for a total of 16,336 gallons of water per day.

The bioenergy facility is anticipated to generate approximately 119 gallons per hour from boiler blowdown water and 29 gallons per hour of reverse osmosis plant wastewater, which will result in

approximately 3,552 gallons per day at 24-hour capacity operations. The proponent intends to dispose of wastewater at the Burney Water District wastewater treatment plant. Coverage under the *General Permit for Storm Water Discharges Associated with Industrial Activities* (Order NPDES No. CAS000001) will be obtained to address stormwater runoff from the project site. Stormwater from the facility will be directed to the west to a bioswale that will convey the stormwater to a vegetated infiltration basin as shown on Figure 5.

2.10 Hazardous Material and Waste Management

Chemicals used for emissions abatement will be stored onsite. These include ammonia/urea, calcium carbonate, and activated carbon. Chemicals are anticipated to be stored in bottles (2.6- to 13-gallon), 26.4-gallon bunded tanks, 2.2-pound bags, and storage tanks (7,925-gallon and 17,171-gallon). In addition, fuel, oil, and hydraulic fluids will be used in equipment at the project site. These will primarily be stored in smaller tanks and drums (less than 70 drums). 2,113 gallons of oil will be required for the steam turbine. Biochar and ash generated by the bioenergy facility will be transported from the site. Inert material can be used as road-building material or incorporated into landscaping material. Air pollution control residue is treated with ammonia/urea and calcium carbonate, collected, and sent to a landfill. A Hazardous Materials Business Plan will be prepared and submitted to the Shasta County Environmental Health Division via the California Electronic Reporting System (CERS). The use and storage of hazardous materials and wastes will comply with all applicable local, state, and safety standards.

3.0 ENVIRONMENTAL CHECKLIST

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

Setting

The majority of the project site is currently undeveloped land; however, a portion of the site has been used historically for storage and loading of materials. The northern portion of the project site is currently used to chip residential fuel-removal materials (branches, limbs, etc.) and contains dirt access roads, storage piles, and equipment. Several buildings from the former McCloud River Railroad rail yard are located in the southern portion of the project site as well as piles of railroad ties removed from the rail line. Mature trees have been removed from the majority of the project site and vegetation consists of grass and sparse shrubs. Forested land is present along the eastern boundary and northeast corner of the project site.

The project site is visible from Black Ranch Road and properties immediately adjacent to the project site. The project site is only partially visible from SR-299 due to the presence of timber between the highway and the project site. The project site is also visible from the Great Shasta Rail Trail which runs through the eastern portion of the project site. The bioenergy facility building (79.2 feet) and stack (115 feet) would exceed the M zone district maximum structural height standard of 45 feet and would extend above surrounding trees and may be visible at distances further from the project site. Exterior lighting will be limited to that required for safe egress from the bioenergy building and general plant and personnel movement. As required by Shasta County Zoning Plan general development standards, all lighting, exterior and interior, shall be designed

and located to confine direct lighting to the premises, and the light source shall not shine upon or illuminate directly on any surface other than the area required to be lighted.

Discussion

a) The Shasta County General Plan does not identify specific scenic vistas within the county. Burney Mountain Vista Point at Postmile 69.71 on SR-299 west of Burney is the closest vista point along the highway to the project site. The project site will not be visible from this vista point. The project site is within a valley and is not clearly visible from distances far away. Project impacts related to a scenic vista will be **less-than-significant.**

b) The project site is visible from SR-299 east of Burney. The portion of SR-299 in the vicinity of the project site is not listed as eligible or as an officially designated state scenic highway. The project will not damage scenic resources within a state scenic highway corridor. **No Impact.**

c) The project site is located in a non-urbanized area. The project site is visible to the public from Black Ranch Road adjacent to and south of the project site as well as from adjacent properties and the Great Shasta Rail Trail which runs through the eastern portion of the project site. The project is also visible from SR-299 through trees adjacent to the roadway.

The project will result in a change to the visual character of the project site since it includes the development of a bioenergy facility, sawmill, and wood-product operations on the project site which is currently mostly vacant. In the southern portion of the project site, the office associated with the former McCloud River Railroad yard will be retained. The other older metal building will be demolished and removed.

Portions of the project site have been used in the past for industrial activities including a rail yard and for storage. Changes to the visual character of the project site will be consistent with the industrial land use designation and zoning of the majority of the project site and surrounding parcels. On the portion of the project site zoned M-L-DR, the project will be required to apply site development standards for the light industrial district. These include a limit on maximum structural height of 45 feet, landscaping requirements, and outdoor lighting requirements. In addition, outdoor storage is required to be completely enclosed by a solid wall or fence not less than six feet in height and no material can be stored to a height greater than that of the wall or fence enclosing the storage area.

The project site will be visible from the adjacent roadways for a short distance. The site will be visible for a short duration when cars are passing and partially screened by trees along SR-299 and the forest north of the project site on Black Ranch Road. Impacts to public views along the roadway will be less-than-significant. Impacts to the views of the project site from the adjacent Great Shasta Rail Trail are potentially significant since there are no barriers between the trail and project activities and trail users would view the site for a longer duration. **Mitigation Measure (MM) AES-1** is included to reduce visual impacts of the project. With implementation of **MM AES-1**, impacts to public views of the site will be **less-than-significant with mitigation incorporation**.

d) The project site does not include new sources of glare. Lighting will be required at the project site since the bioenergy facility will operate 24 hours per day. Lighting may also be required in

other areas of the project site for security purposes. The property is surrounded by commercial, industrial and agricultural uses and timberlands. There are no sensitive receptors adjacent to the project site. As required by Shasta County Zoning Plan general development standards, all lighting, exterior and interior, shall be designed and located to confine direct lighting to the premises, and the light source shall not shine upon or illuminate directly on any surface other than the area required to be lighted. With adherence to this requirement, lighting of buildings at the project site will not result in glare. Impacts related to light and glare will be **less-than-significant**.

Aesthetics Mitigation Measures

The following mitigation measure is required to reduce the impacts related to public views of the project site to less-than-significant:

MM AES-1: Construct Visual Barrier
A visual barrier consisting of a solid fence (cyclone fence with slats) and native trees/vegetation shall be constructed between project operations and the adjacent Great Shasta Rail Trail alignment and parking area. The barrier shall be constructed sufficiently tall and long enough to screen the majority of activities at the project site (excluding the bioenergy facility stack) from view of trail users.

II. AGRICULTURE AND FOREST 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 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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less-than-significant Impact	No Impact
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature that could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Setting

Most of the project site is zoned M-L-DR with a General Plan designation of Industrial (I). An approximately 10-acre portion of the project site has a General Plan designation of Agricultural Croplands (A-C) and is in the U zone district. The project site is not used for agricultural purposes and historically has been used for storage and loading of materials.

Discussion

a) The project site does not include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on California Department of Conservation California Important Farmland Finder maps. **No impact**.

b) An approximately 10-acre portion of the project site has a General Plan designation of Agricultural Croplands (A-C) and is in the U zone district. According to the Shasta County General Plan, lands designated as A-C shall be principally used for grazing and/or crop production. The U zone district is intended to be applied as a holding district until a precise principal zone district has been adopted for the property. All new uses in this district shall be consistent with all applicable policies of the general plan.

The portion of the project site designated A-C has not been used for agricultural purposes in the past. This portion of the project site was forested until recently when trees were cleared in 2020. It is part of a larger parcel designated A-C totaling 78.23 acres. The parcel does not meet the Burney Creek Valley minimum parcel size requirement of 160 acres that would classify use of the parcel by a full-time operator for the primary use listed to be economically worthwhile (see minimum parcel size requirements in Table AG-2 of the Shasta County General Plan). In addition, the approximately 10-acre portion of the A-C parcel within the project site is on the opposite side of Black Ranch Road from the remainder of the parcel and does not have access to surface water for irrigation. Development of the approximately 10-acre portion of the agricultural parcel will not preclude or interfere with agricultural uses on the remaining portion of the agricultural parcel not included in the project.

The project site is not under a Williamson Act Land Use Contract. Impacts related to conflict with existing zoning for agricultural use will be **less-than-significant.**

c) The project site includes approximately 14 acres of forested area but is zoned M-L-DR. Because the timbered area is not zoned Timberland (TL) or Timer Production (TP) and is already zoned for industrial uses, the project would not rezone any TL or TP property. **No Impact.**

d) The project will result in the loss of approximately 14 acres of forested land and the conversion of that forest land to non-timber uses. A portion of APN 030-390-070 contains approximately 14 acres of ponderosa pine.

The existing M-L-DR zoning and proposed change to the M-DR zone district do not preclude the retention and use for long-term timber production, but such use is not favored. In addition, the approximately 14-acre conversion of timberland will be minimal relative to the amount of timberland in Shasta County and the state of California. According to the Shasta County General Plan, there are 2,428,000 total acres of timberland in Shasta County. There are 16,616,065 acres of timberlands within the state of California (CDFW, 2022). Therefore, the impact of converting approximately 14 acres of ponderosa pine forest for the project would not be significant.

A Timberland Conversion Permit and Timber Harvest Plan would be required for the project under California Forest Practice Rules, Title 14 CCR, Chapter 4. Impacts related to the loss of forest land will be **less-than-significant.**

e) The project will include development of the project site for industrial use. The project does not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use or forestland to non-forest use. **No impact**.

Mitigation Measures: None proposed.

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:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Setting

The United States Environmental Protection Agency (USEPA) has established the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) for six common air pollutants known as "criteria pollutants". These air pollutants consist of carbon monoxide (CO),

nitrogen oxides (NOx), sulfur dioxide (SO_2), volatile organic compounds (VOC) as reactive organic gases (ROG), particulate matter less than 10 micrometers (coarse or PM_{10}), particulate matter less than 2.5 micrometers (fine or $PM_{2.5}$), and lead (Pb). Similar standards have been adopted by the state of California called California Ambient Air Quality Standards (CAAQS).

The project site is located in the Northern Sacramento Valley Air Basin (NSVAB). The Shasta County Air Quality Management District (SCAQMD) is the air pollution regulatory agency for the portion of the NSVAB in Shasta County. Under federal air quality standards, Shasta County is designated as attainment for all criteria pollutants. Under State air quality standards, Shasta County is designated as nonattainment for ozone and is designated as attainment/unclassified for all other pollutants. The NSVAB is designated as nonattainment for the PM_{10} State air quality standard.

SCAQMD's *Protocol for Review, Land Use Permitting Activities, and Procedures for Implementing the California Environmental Quality Act* includes the following thresholds of significance for emissions:

- Daily emissions of 25 pounds per day of ROG and NO_x and 80 pounds per day of PM_{10} (Level A)
- Daily emissions of greater than 137 pounds per day of ROG, NO_x, and PM_{10} (Level B)

The SCAQMD and the Shasta County General Plan recommend that projects apply Standard Mitigation Measures (SMM) and appropriate Best Available Mitigation Measures (BAMM) when a project exceeds Level A thresholds and that projects apply SMM, BAMM, and special BAMM when a project exceeds Level B thresholds. Projects that cannot mitigate emissions to levels below the Level B thresholds are considered significant. All projects within Shasta County are subject to applicable SCAQMD rules and regulations in effect at the time of construction.

Discussion

An Air Quality Technical Report was prepared for the project by RCH Group which provides an overview of the existing air quality conditions at the project site, an analysis of potential air quality impacts that would result from implementation of the project, and identification of applicable mitigation measures. The Air Quality Technical Report is included as Appendix A.

Air quality impacts were determined for United States Environmental Protection Agency (USEPA) criteria air pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter equal to or less than 10 micrometers (coarse particulate or PM_{10}), and particulate matter equal to or less than 2.5 micrometers (fine particulate or $PM_{2.5}$). When volatile organic compounds (VOC) such as reactive organic gases (ROG) and nitrogen oxide (NO_x) accumulate in the atmosphere and are exposed to the ultraviolet component of sunlight, ozone (O_3) is formed. As such, the assessment of ozone was performed using emission estimates of ROG and NO_x, known as pollutant precursors. The air quality analysis is consistent with the methods described in SCAQMD's *Protocol for Review, Land Use Permitting Activities, Procedures for Implementing the California Environmental Quality Act*. Estimates of the emissions generated during construction and operation of the project are included in Tables 1 through 3 and are discussed below.

Construction

Table 1 shows the estimated daily unmitigated emissions for construction related emissions (including combustion engine and fugitive dust emissions) for the proposed project. The total construction emissions as well as the contribution from employee vehicle trips, pickup/delivery trucks, haul trucks, and off-road equipment are presented. The off-road equipment represents the largest contribution to the total construction emissions. The daily unmitigated NO_x construction emissions would potentially exceed the SCAQMD thresholds of significance (Level A) during 2023. The daily unmitigated PM_{10} construction emissions would potentially exceed the SCAQMD thresholds of significance (Level B) during 2023. Therefore, appropriate mitigation measures are required (such as requiring USEPA Tier 3 or better engine emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower and periodic watering).

Table 1
DAILY UNMITIGATED CONSTRUCTION EMISSIONS OF PROPOSED PROJECT (pounds)

Emission Source	ROG	CO	NO_x	PM_{10}	$PM_{2.5}$
2023					
Employee Vehicles	0.04	2.45	0.19	0.04	0.01
Off-Road Equipment Onsite	3.36	28.6	31.2	1.08	0.99
Offsite Haul Trucks	0.02	0.09	1.18	0.16	0.07
Onsite Paving	3.42	29.0	34.6	10.9	5.03
Fugitive Dust				140	29.4
Total	**6.83**	**60.1**	**67.1**	**152**	**35.5**
Significance Thresholds (Level A)	25	---	25	80	---
Significance Thresholds (Level B)	137	---	137	137	---
2024					
Employee Vehicles	0.02	1.23	0.09	0.02	0.01
Off-Road Equipment Onsite	2.57	21.9	22.5	0.75	0.69
Offsite Haul Trucks	0.02	0.09	1.18	0.16	0.07
Total	**2.60**	**23.2**	**23.8**	**0.94**	**0.77**
Significance Thresholds (Level A)	25	---	25	80	---
Significance Thresholds (Level B)	137	---	137	137	---

Source: RCH Group, 2021

Table 2 shows the estimated daily mitigated emissions for construction related emissions (including combustion engine and fugitive dust emissions) for the proposed project. Despite mitigation, the NOx emissions would be above the SCAQMD Level A threshold during 2023. However, while an exceedance of the Level A threshold must be addressed through the application of appropriate Standard Mitigation Measures (SMMs) and Best Available Mitigation Measures (BAMMs) in accordance with the Shasta County General Plan, the Level A threshold is not used to determine whether the impact is significant or adequately mitigated to a less-than-significant level.

In accordance with the Shasta County General Plan, projects can be determined to have been adequately mitigated to a less-than-significant level provided that after SMMs, BAMMs, and, if the Level B thresholds are exceeded, special BAMMs have been appropriately applied and as a result project emissions levels are reduced below the Level B thresholds. After mitigation, PM_{10} emissions are reduced below the Level B threshold and, therefore, are also less-than-significant.

Table 2 DAILY MITIGATED CONSTRUCTION EMISSIONS FOR PROPOSED PROJECT (pounds)					
Emission Source	**ROG**	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**
2023					
Employee Vehicles	0.04	2.45	0.19	0.04	0.01
Off-Road Equipment Onsite	1.85	37.2	29.6	0.22	0.20
Offsite Haul Trucks	0.02	0.09	1.18	0.16	0.07
Onsite Paving	2.30	37.4	30.0	4.04	1.69
Fugitive Dust				35.0	7.35
Total	**4.20**	**77.2**	**61.0**	**39.5**	**9.32**
Significance Thresholds (Level A)	25	-	25	80	-
Significance Thresholds (Level B)	137	-	137	137	-
2024					
Employee Vehicles	0.02	1.23	0.09	0.02	0.01
Off-Road Equipment Onsite	1.41	28.5	21.4	0.15	0.14
Offsite Haul Trucks	0.02	0.09	1.18	0.16	0.07
Total	**1.45**	**29.8**	**22.7**	**0.33**	**0.21**
Significance Thresholds (Level A)	25	-	25	80	-
Significance Thresholds (Level B)	137	-	137	137	-

Source: RCH Group, 2021

Operation

The proposed project includes a 5-MW bioenergy facility, small specialty sawmill, dry kilns, and chipping and grinding operation as well as employee trips and haul trucks, and a number of off-road equipment such as forklifts and loaders. The facility will use a gasification-fed boiler system to convert woody biomass to electricity and a ceramic catalytic filter system to regulate air emissions. In addition to the bioenergy facility, the proposed project includes a wood product operation. The operation will include a small sawmill, grinder, and dry kilns that will produce specialty softwood products.

Emissions from the boiler would be reduced using a combination of a selective non-catalytic reduction (SNCR) system with urea injection in the early combustion stages and a selective catalytic reduction (SCR) system comprised of a second urea injection grid upstream of the catalytic ceramic filter to neutralize any acidic gases in the exhaust stream. The ceramic filter will also effectively capture particulate matter emissions in the form of PM_{10}. Air pollutant emissions of concern are primarily particulate matter from sawing and grinding, VOC/ROG emissions from drying, and NOx from boilers and emergency diesel generators. For sources with available water, water sprays will be used to control particulate matter emissions.

Table 3 presents the uncontrolled and controlled (with biomass boiler emission reduction measures including SNCR, SCR and a ceramic filter) daily operational emissions. A majority of the NOx emissions would be from the operation of the biomass boiler, a majority of the VOC/ROG emissions would be from the dry kilns, and a majority of the PM_{10} emissions would be from operation of the sawmill. As shown in Table 3, the unmitigated daily NOx emissions are greater than the significant thresholds (Level B). However, the mitigated daily NOx emissions are less than the significant thresholds (Level B) and, therefore, would be less-than-significant. Emissions from the biomass boiler will be controlled using SNCR, SCR, and a ceramic filter which are considered Best Available Mitigation Measures. Emissions of VOC/ROG are less than the Level B significance thresholds. The use of SNCR, SCR and a ceramic filter as proposed would be required as a condition of approval of the requested use permit and would be the minimum requirement for project air pollution controls. Uncontrolled emissions of PM_{10} would be below the Level A thresholds and are, therefore, less-than-significant.

Table 3 DAILY OPERATIONAL EMISSIONS FOR PROPOSED PROJECT (pounds)						
Emission Source/Year	**ROG**	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Uncontrolled						
Employee Vehicles	0.01	0.77	0.06	<0.01	<0.01	<0.01
Off-road Equipment Onsite	0.57	5.60	3.24	0.12	0.11	<0.01
Offsite Haul Trucks	0.22	6.49	8.61	1.20	0.48	0.20
Generators	5.78	79.2	15.2	0.91	0.91	55.9
Biomass Boiler	2.71	41.8	244	3.14	3.14	1.07
Dry Kiln	110					
Grinder	0.45	3.65	9.91	4.66	2.40	<0.01
Sawmill	0.07	0.77	0.64	68.3	31.2	<0.01
Total	**120**	**138**	**282**	**78.4**	**38.2**	**57.1**
Significance Thresholds (Level A)	25	-	25	80	-	-
Significance Thresholds (Level B)	137	-	137	137	-	-
Controlled						
Employee Vehicles	0.01	0.77	0.06	<0.01	<0.01	<0.01
Off-road Equipment Onsite	0.57	5.60	3.24	0.12	0.11	<0.01
Offsite Haul Trucks	0.22	6.49	8.61	1.20	0.48	0.20
Generators	5.78	79.2	15.2	0.91	0.91	55.9
Biomass Boiler	2.71	41.8	24.4	3.14	3.14	1.07
Dry Kiln	110					
Grinder	0.45	3.65	9.91	4.66	2.40	<0.01
Sawmill	0.07	0.77	0.64	68.3	31.2	<0.01
Total	**120**	**138**	**62.0**	**78.4**	**38.2**	**57.1**
Significance Thresholds (Level A)	25	-	25	80	-	-
Significance Thresholds (Level B)	137	-	137	137	-	-

Source: RCH Group, 2021

This significance determination does not account for levels of emissions associated with the open burning of forest thinning debris and hazardous fuels in area forests that would be avoided by the operation of the proposed project. This is because the SCAQMD's respective mass emission thresholds are for maximum daily emission levels and the timing of open burning is unknown. In other words, it is likely that there would be days when all the emissions sources would be in operation, but open burning of forest refuse would not be taking place in area forests.

a) The Northern Sacramento Planning Area *2018 Triennial Air Quality Attainment Plan* (2018 Plan) was jointly prepared by the air quality management districts for the counties located in the northern portion of the Sacramento Valley. The 2018 Plan includes control strategies necessary to attain the California ozone standard at the earliest practicable date.

In the Northern Sacramento Valley Planning Area (NSVPA), ozone can be caused by stationary source emissions, such as internal combustion engines or boilers, mobile sources such as cars, truck and trains, or area sources such as consumer products or wildfires (SVAQEEP 2018). The Air Quality Attainment Plan includes projected emissions of ozone precursor emissions including NOx and ROG. Based on the Emission Inventory contained in the 2018 Plan, projected emissions show a downward trend for both ROG and NOx. NOx emissions were forecasted to reduce by 32 percent and ROG emissions were forecasted to reduce by 16 percent between 2010 and 2020 within the NSVPA (SVAQEEP 2018).

The NSVPA air districts have adopted several control measures and programs that reduce emissions from new development during the planning process or through control of specific sources of emission. The rules and programs applicable to new development in Shasta County and applicable to the project include consistency with the Shasta County General Plan, and the Air District rules related to architectural coatings and fugitive dust during construction. The project is subject to all applicable SCAQMD rules and regulations. The project would not directly conflict with implementation of the 2018 Plan. However, project construction and operations would result in emissions of NOx and ROG which are precursors to ozone.

As shown in Table 1 above, unmitigated construction emissions would potentially exceed the SCAQMD thresholds of significance for NOx. Implementation of standard mitigations measures (SMM) during construction (included as **Mitigation Measure (MM) AIR-1**) will reduce emissions of NOx to below Level A thresholds for the year 2024 and below the Level B thresholds for the year 2023 as shown in Table 2. As shown in Table 3, controlled operational emissions generated by the project will be below Level B thresholds for NOx. The bioenergy facility will use SCR on the boiler which is considered a Best Available Mitigation Measure. With implementation of **Mitigation Measure MM AIR-1** and implementation of SCR on the boiler of the bioenergy facility, NOx emissions generated by the project would be reduced to less than the applicable Level B significance threshold and would not have a substantial effect on the regional or local air quality in the NSVAB and would not conflict or obstruct with the 2018 Plan. Impacts will be less-than-significant **with mitigation incorporation**.

b) Shasta County is designated as nonattainment for ozone. The County is classified as either unclassified or as in attainment with State and federal Standards for all other criteria pollutants; however, the rest of the Air Basin is classified as non-attainment of the State PM_{10} standards. Project construction and operation will generate emissions of PM_{10} and ozone precursors (NOx and ROG).

As shown in Table 1, daily unmitigated construction emissions would potentially exceed the SCAQMD thresholds of significance for NOx (Level A threshold) and PM_{10} (Level B threshold). The standard mitigation measures (SMMs) included as **MM AIR-1** will reduce construction emissions of PM_{10} to below Level A thresholds. NOx emissions from construction will be below Level A thresholds for the year 2024 and below the Level B thresholds for the year 2023 with implementation of **MM AIR-1**. As shown in Table 3, controlled operational emissions generated by the project will be below Level B thresholds for NOx and ROG. The bioenergy facility will use SCR on the boiler which is considered a Best Available Mitigation Measure. Implementation of Mitigation Measure **MM AIR-1** and implementation of SCR on the boiler of the bioenergy facility will reduce emissions of PM_{10} and ozone precursors to a less-than-significant level. Impacts related to increases in PM_{10} and ozone precursors will be **less-than-significant with mitigation incorporation**.

c) The proposed project is expected to emit a variety of air toxics (including diesel particulate matter); therefore, a Health Risk Assessment (HRA) was completed to evaluate the health impacts of the project as required by the SCAQMD's *Policy Establishing Guidelines for Toxics Health Risk Assessment*. The HRA completed for the project including the methodologies and assumptions for the assessment are included in the Air Quality Technical Report (Appendix A).

The project would constitute a new emission source of air toxics during operational activities. Studies have demonstrated that certain pollutants are human carcinogens, and that chronic (long-term) inhalation exposure poses a chronic health risk. The impacts of the project would be potentially significant if it would result in exposure of persons to a cancer risk level greater than 10 in one million and or a noncancerous risk (chronic or acute) hazard index greater than 1.0.

The nearest residences are approximately ~~3,500~~ 4.100 feet south and ~~4,300~~ 1,700 feet north of the bioenergy facility boiler. Calvary Chapel Burney Falls is approximately 3,500 feet to the south of the boiler. The Great Shasta Rail Trail is located along the eastern boundary of the project site. There are also offsite worker receptors to the north and east of the project site.

Health impacts of the project were estimated at the nearest existing sensitive receptors (residences and offsite worker locations) to the project site. Estimated health impacts of the project construction and operation are included in Table 4.

Table 4
ESTIMATED HEALTH IMPACTS AT EXISTING RECEPTORS AND OFFSITE WORKER

Source	Cancer Risk	Acute Impacts	Chronic Impact
Proposed Project Construction (Residence)	0.76	-	0.01
Proposed Project Operations (Residence)	2.11	0.06	0.01
Proposed Project Total (Residence)	**2.87**	**0.06**	**0.02**
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No
Proposed Project Construction (Offsite Worker)	0.11	-	0.01
Proposed Project Operations (Offsite Worker)	2.02	0.10	0.10
Proposed Project Total (Offsite Worker)	**2.13**	**0.10**	**0.11**
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No

As shown in Table 4, the cancer risk and health impacts due to construction and operational activities would be less than the threshold of 10 per million and would be less-than-significant.

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the Project to a reference exposure level (REL) that could cause adverse health effects. The REL are published by OEHHA based on epidemiological research. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated for each organ system. The impact is considered to be significant if the overall HI for the highest-impacted organ system is greater than 1.0.

The acute and chronic HI would be 0.06 and 0.02 for the residential receptors and 0.10 and 0.11 for the offsite worker receptors, respectively. The acute and chronic HI would be below the threshold of 1.0; therefore, the health impact of the proposed project would be less-than-significant. The project will not expose sensitive receptors to substantial pollutant concentrations. **Less-than-significant impact**.

d) Though offensive odors from stationary and mobile sources rarely cause any physical harm, they remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Potential localized odor sources associated with proposed project operation-related activities could originate from fumes from the bioenergy boiler, sawmill, diesel exhaust from off-road haul equipment, and diesel exhaust from incoming and outgoing diesel-fueled heavy-duty transport vehicles. The biomass feedstock piles could also be a source of odor. Proper management of the feedstock piles will reduce anaerobic conditions and odor from feedstock storage.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, often air districts recommend that odor analyses strive to fully disclose all pertinent information. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. For example, San Joaquin Valley Unified Air Pollution Control District has identified some common types of facilities that have been known to produce odors, which includes facilities like wastewater treatment operations, sanitary landfills, composting facilities, and transfer stations. Bioenergy facilities and wood products operations are not on the list of potential odor sources.

This screening level for potential odor sources can be used as a screening tool to qualitatively assess a project's potential to adversely affect area receptors. The project site is located in a generally rural area surrounded by open space; the nearest residential receptors are located approximately ½ mile to the south and north of the project site. Notably, the primary wind direction is south and north. Odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions and air stagnation, which hamper vertical mixing and dispersion during early morning and wintertime. Generally, an odor source with five or more confirmed complaints per year averaged over three years could be considered to have a significant impact. However, it should be recognized that there is not one piece of information that can solely be used to determine the significance of an odor impact. Therefore, based on the previous information, the proposed project odor impacts would be expected to be **less-than-significant**.

Air Quality Mitigation Measures

The following mitigation measures describe several specific actions to reduce construction combustion and fugitive dust emissions. Application of SMM is required in order to strive toward the General Plan policy of a 20 percent reduction in emissions to address small-scale cumulative effects. SMM applicable to this proposed project address primarily short-term impacts related to construction and are standard development regulations promulgated in California Building Code.

MM AIR-1: Implement SMM for NOx and Fugitive Dust Emissions during project construction:

1. Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas (previously graded areas inactive for ten days or more).

2. All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour.
3. Temporary traffic control shall be provided as appropriate during all phases of construction to improve traffic flow (e.g., flag person).
4. Construction activities that could affect traffic flow shall be scheduled in off-peak hours.
5. Active construction areas, haul roads, etc., shall be watered at least twice daily or more as needed to limit dust.
6. Exposed stockpiles of soil and other backfill material shall either be covered, watered, or have soil binders added to inhibit dust and wind erosion.
7. All truck hauling solid and other loose material shall be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer). This provision is enforced by local law enforcement agencies.
8. All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads. Wheel washers shall be used where vehicles enter and exit unpaved roads onto paved roads, or trucks and any equipment shall be washed off leaving the site with each trip.
9. All vehicle speeds on unpaved surfaces shall be limited to 15 miles per hour.
10. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
11. A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
12. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
13. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
14. Where access to alternative sources of power are available, portable diesel engines shall be prohibited.
15. All off-road equipment larger than 50 horsepower shall have engines that meet or exceed USEPA or CARB Tier 3 off-road emission standards and Level 3 Diesel Particulate Filters. Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the agency and demonstrated to reduce community risk impacts to less-than-significant.

16. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet CARB's 2010 engine emissions standards at 0.01 g/hp-hour of particulate matter and 0.20 g/hp-hour of NO_x emissions or newer, cleaner trucks.
17. The VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

IV. BIOLOGICAL RESOURCES Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting

A general biological survey and review of the project site was completed by VESTRA. The site visit was conducted by a qualified VESTRA Biologist in April of 2021 and an additional protocol-

level botanical survey was completed within the project area by a qualified VESTRA Biologist on August 22, 2023. The findings of the biological review are presented in this section of the Initial Study/Mitigated Negative Declaration and have not been provided under a separate cover.

Regulatory Setting

Biological resources in California are protected and regulated by a variety of laws, regulations, plans, and policies administered by federal, state, and local agencies. This section summarizes the biological resource-related agencies, regulations, and policies relevant to the project.

Federal

Federal Endangered Species Act

Section 9 of the Federal Endangered Species Act of 1973 (FESA) prohibits actions that result in the "take" of threatened or endangered species. As defined by the FESA, "endangered" refers to any species that is in danger of extinction throughout all or a significant portion of its current range. The term "threatened" is applied to any species likely to become endangered within the foreseeable future throughout all or a significant portion of its current range. "Take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Sections 7 and 10 of the FESA provide methods for permitting otherwise lawful actions that may result in "incidental take" of a federally listed species. Incidental take" refers to take of a listed species that is incidental to, but not the primary purpose of, an otherwise lawful activity. Incidental take is permitted under Section 7 for projects on Federal land or involving a Federal action; Section 10 provides a process for non-federal actions. The act is administered by the U.S. Fish and Wildlife Service (USFWS) for terrestrial species.

Migratory Birds

California Fish and Game Code Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act (MBTA) or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA. Project features will be implemented to protect nesting migratory birds and birds of prey to comply with this code.

Migratory birds are protected under the MBTA of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products except as allowed by implementing regulations (50 CFR 21). Mitigation measures can be identified to avoid or minimize adverse effects on migratory birds. Nesting habitat is present throughout the study area in trees, shrubs, ground, and other structures.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) makes it illegal to trade in any bald eagle or golden eagle or parts thereof. The Act provides criminal penalties for person who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle… [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or

bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causes injury, death or nest abandonment.

State

California Endangered Species Act

The California Endangered Species Act (CESA) lists species of plants and animals as threatened or endangered. Projects that may have adverse effects on state-listed species require formal consultation with CDFW. "Take" of protected species incidental to otherwise lawful activities may be authorized under Section 2081 of the California Fish and Game Code. Authorization from the CDFW is in the form of an incidental take permit and measures can be identified to minimize take. CDFW Species of Special Concern (SSC) are considered under the California Endangered Species Act.

Birds of Prey

Under Section 3503.5 of the California Fish and Game Code, it is "unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto." Project features will be implemented to protect nesting migratory birds and birds of prey to comply with this code.

Fully Protected Species & Species of Special Concern

California statutes also accord "fully protected" status to several specifically identified birds, mammals, reptiles, amphibians, and fish. These species cannot be "taken," even with an incidental take permit (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, and 5515).

California SSC are animals not listed under the FESA or CESA but are nonetheless of concern because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to existence currently exist. This designation is intended to result in special consideration for these animals by CDFW, land managers, consulting biologists, and others and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation is also intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration in the CEQA process and are analyzed along with listed species in the CEQA Appendix G checklist.

Protection for rare plant species under CESA is afforded by the California Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code 1900-1913), which prohibits the importation of rare and endangered plants into California, take of rare and endangered plants, and sales of rare and endangered plants. The California Native Plant Society (CNPS) also identifies rare or endangered plants and ranks their rarity as 1A, 1B, 2, 3, and 4 species. Plant species with a California Rare Plant Rank 1A, 1B, or 2 are considered to meet CEQA significance criteria and Fish and Game Code Sections 1901, 2062, and 2067 criteria as rare or endangered species.

Local

Shasta County General Plan

The Fish and Wildlife Habitat element of the Shasta County General Plan incorporates requirements from the State-mandated Conservation and Open Space Elements found in

Government Code Sections 65302(d) and 65560. Passages from the codes dealing with fish and wildlife resources are as follow:

> Government Code Section 65302(d) requires that the General Plan includes *"A conservation element for the conservation, development and utilization of natural resources including ...fisheries, wildlife,.. and other natural resources..."*.
>
> Government Code Section 65560(b)(1) states that: *"Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitats for fish and wildlife species; (and) areas required for ecologic and other scientific study purposes…"*.

The project area is in a previously disturbed industrial zoning area. Building a bioenergy facility in this location aligns with Shasta County General Plan Objective (6.7.3) FW-2 that states: *"Provide for a balance between wildlife habitat protection and enhancement and the need to manage and use agricultural, mineral extraction, and timber land resources."* This is aligned with the goals of the project due to the bioenergy facility allowing and incentivizing an expansion on removing fuel loads to improve forest health and habitat. Removing the forest residuals and debris not only can improve forest health but can also decrease fire danger on a long-term scale.

Environmental Setting

Methodology

Desktop Review

Special-status wildlife and habitats that have potential to occur within the project site were determined, in part, by sources such as agency databases, relevant literature, and the following:

- Redding, California, USGS 7.5-minute quadrangle;
- Aerial photography of the project site and surrounding area;
- USFWS official list of endangered and threatened species that may occur, or be affected by the proposed project, provided by the Klamath, Sacramento, and Yreka Fish and Wildlife Office (*Consultation Code 08ESMF00-2021-SLI-0554);*
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2021a) records for the Redding, California, USGS 7.5-minute quadrangle and the eight surrounding quadrangles;
- CNPS online Inventory of Rare and Endangered Plants (CNPS 2021) records for the Redding, California, USGS 7.5-minute quadrangle and the eight surrounding quadrangles;
- California Wildlife Habitat Relationships (CWHR) System;
- GIS shapefiles of designated critical habitat from the USFWS Critical Habitat Portal website;
- CDFW publications including State and Federally Listed Endangered, Threatened and Rare Plants of California (CDFW 2021b); State and Federally Listed and Threatened Animals of California (CDFW 2021c); and Special Animals List (CDFW 2021d); and
- Relevant biological literature including Bird Species of Special Concern in California (Shuford and Gardali 2008).

Site Survey

The site setting was determined by completing a pedestrian survey of the project area on April 1, 2021. During the survey, the vegetation communities and habitat types present onsite were documented. Plant and wildlife species observed onsite were recorded. Each of the habitat types present onsite are described below and a discussion of habitat characteristics are incorporated into the assessment of impacts to potentially occurring special-status species herein this document.

On August 22, 2023, a protocol-level botanical survey was completed within the project area between 1300 and 1730. The survey was completed according to "*Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*" published by California Department of Fish and Wildlife (CDFW). Methods included walking transects across areas with habitat for the potentially occurring special status plant species Lassen paintbrush (*Castilleja lassenensis*) and Jepson's dodder (*Cuscuta jepsonii*). All plant species observed were identified onsite to the taxonomic level necessary to determine conservation status. The results of the survey are incorporated into the project impacts discussion for each species under item a) below. Additional survey details and a map of the survey area are included in the Botanical Survey Technical Memo which is available as noted in the general comments on page 90 below.

Baseline Site Conditions

Vegetation Communities & Habitat Types

Regional

According to the California Wildlife Habitat Relationships (CWHR), the surrounding area includes the following habitat types: perennial grassland, pasture, ponderosa pine forest, Sierra mixed conifer, urban, and montane chaparral. CWHR habitat types are included on Figure 7. Based on the site visit conducted, many habitats have been disturbed and now reflect a heavy presence of agricultural cropland and industrial sites within a five-mile radius. Urban habitat type could also be present due to the proximity of the project area to the town of Burney and its close proximity to SR-299 in the southeastern boundary of the parcel.

Project Area

The habitat onsite was determined through consultation with the California Wildlife Habitat Relationships (CWHR) database as well as observations made during the site survey. No updated VegCAMP mapping is available for this survey area. A portion of the site is disturbed and, therefore, an adjacent reference site was surveyed to determine the natural vegetation community onsite. The area consists of a ponderosa pine canopy with low-quality shrub mid-canopy habitat and an understory consisting of perennial and annual grass species. The poor condition of the shrub community onsite and the second-growth pine upper canopy suggests that conifer encroachment has degraded what was a montane chaparral habitat.

Three habitat types were observed on the project site: ponderosa pine, sagebrush/annual grassland, and montane hardwood-conifer.

Ponderosa Pine

Ponderosa pine (*Pinus ponderosa*) forest is the dominant species in these habitat types and can possibly be codominant in the tree canopy with white fir (*Abies concolor*), incense cedar (*Calocedrus decurrens*), Sierra juniper (*Juniperus grandis)*, western juniper (*Juniperus occidentalis*), tanoak (*Notholithocarpus densiflorus*), Sierra lodgepole pine (*Pinus contorta* ssp. *Murrayana*), Coulter pine (*Pinus coulteri*), Jeffrey pine (*Pinus jeffreyi*), sugar pine (*Pinus lambertiana*), Douglas fir (*Pseudotsuga menziesii*),

canyon live oak (*Quercus chrysolepis)*, California black oak (*Quercus kelloggii*), and interior live oak (*Quercus wislizeni)*. Ponderosa pine is widely distributed across western North America and provides wildlife habitat to many different species. Ponderosa pine habitat onsite is heavily dominated by ponderosa pine with antelope bitterbrush (*Purshia tridentate* ssp. *tridentata*) understory. This equates to the ponderosa pine forest and woodland habitat, which is ranked as "S4." This habitat occupies approximately 50 percent of the project area.

Sagebrush/Annual Grassland
Sagebrush habitat is usually large, open, and often discontinuous and stands are dominated by big sagebrush (*Artemisia tridentata*). This habitat occurs over a range of middle and high elevations. Sagebrush often mixes with other similar shrub species, such as rabbitbrush (*Ericameria nauseosa*), horsebrush (*Tetradymia* spp.), and bitterbrush (*Purshia tridentate*). In some locations stands many have an understory of perennial grasses and forbs. According to the CWHR, most of the central project area is considered sagebrush habitat. However, this site has been disturbed heavily by industrial and agricultural uses.

During the site visit, habitat mapped as sagebrush by CWHR was determined to be annual grassland habitat. Annual grasslands are characterized by open, flat, grassy areas composed of annual plant species such as wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis*), wild barley (*Hordeum spontaneum*), and foxtail fescue (*Vulpia myuros*). These habitat types can also include perennial grasses, common forbs, and vernal pool features. No vernal pools are present onsite. Occurrence can be as understory in other habitats and structure of habitat depends heavily on weather and livestock. Many wildlife species are able to utilize these habitat types for diet, but some species require additional features (e.g. cliffs, ponds) to thrive. This habitat occupies approximately 50 percent of the project area.

Montane Hardwood-Conifer
Montane hardwood conifer (MHC) habitat is often a closed forest and consists of various conifer and hardwood species (one-third of each to be considered MHC). Characteristic species of this habitat type can include incense cedar (*Calocedrus decurrens*), tanoak (*Notholithocarpus densiflorus*), Douglas fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii),* and California black oak (*Quercus kelloggii*). Little understory occurs in these habitats and coverage on the forest floor is comprised of leaf and branch litter. MHC habitat is mapped on a small portion of the project area; however, this habitat was not observed onsite.

Plant species observed onsite during the August 2023 botanical surveys are shown in Table 5A below.

Table 5A BURNEY BIOMASS PLANT SURVEY LIST		
Common Name	**Species Scientific Name**	**Conservation Status**
Wicker buckwheat	*Eriogonum luteolum*	N/A
Nude buckwheat	*Eriogonum nudum*	N/A
California poppy	*Eschscholzia californica*	N/A
Pinemat ceanothus	*Ceanothus prostratus*	N/A
Bull thistle	*Cirsium vulgare*	N/A
Ponderosa pine	*Pinus ponderosa*	N/A
California black oak	*Quercus kelloggii*	N/A
Western juniper	*Juniperus occidentalis*	N/A
Manzanita	*Arctyostaphylos* sp.	N/A
Intermediate wheatgrass	*Elymus hispidus*	N/A
Yarrow	*Achillea millefolium*	N/A
Yellow star thistle	*Centaurea soltitialis*	N/A
Fireweed	*Epilobium* sp.	N/A
Dock	*Rumex* sp.	N/A
Spreading dogbane	*Apocynum androsaemifolium*	N/A
Sunflower	*Helianthus annuus*	N/A
Currant	*Ribes* sp.	N/A
Antelope bitterbrush	*Purshia tridentata*	N/A
Blue fescue	*Festuca*	N/A
Snowdrop bush	*Styrax*	N/A
Davidson's penstemon	*Penstemon davidsonii*	N/A
Western goldenrod	*Solidago lepida*	N/A
Bottlebrush squirreltail	*Elymus elymoides*	N/A
Pepperweed	*Lepidium* sp.	N/A
Lotus	*Acmispon* sp.	N/A
Wooly mullein	*Verbascum thapsus*	N/A
Milkweed	*Asclepias* sp.	N/A

Critical Habitats
No critical habitats occur within or near the project site.

Sensitive Natural Communities
The California Sensitive Natural Communities list was reviewed for natural communities that are listed as S1, S2, and S3, and would warrant consideration under CEQA review. None of the associations that included ponderosa pine as a dominant species and are listed as S1-S3 have been observed within the project area.

Special-Status Species ~~Wildlife (CNDDB)~~
An assessment was completed onsite following the pre-survey review in order to determine potential project impacts to special-status plant and animal species as well as other sensitive biological resources. The findings of the assessment are shown in Table 5B below and are

incorporated in the responses below. Special-status wildlife and habitats that have potential to occur within the project site were determined, in part, by sources such as agency databases, relevant literature, and the following:

- Redding, California, USGS 7.5-minute quadrangle;
- Aerial photography of the project site and surrounding area;
- USFWS official list of endangered and threatened species that may occur, or be affected by the proposed project, provided by the Klamath, Sacramento, and Yreka Fish and Wildlife Office (*Consultation Code 08ESMF00-2021-SLI-0554);*
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2021a) records for the Redding, California, USGS 7.5-minute quadrangle and the eight surrounding quadrangles;
- CNPS online Inventory of Rare and Endangered Plants (CNPS 2021) records for the Redding, California, USGS 7.5-minute quadrangle and the eight surrounding quadrangles;
- California Wildlife Habitat Relationships (CWHR) System;
- GIS shapefiles of designated critical habitat from the USFWS Critical Habitat Portal website;
- CDFW publications including State and Federally Listed Endangered, Threatened and Rare Plants of California (CDFW 2021b); State and Federally Listed and Threatened Animals of California (CDFW 2021c); and Special Animals List (CDFW 2021d); and
- Relevant biological literature including Bird Species of Special Concern in California (Shuford and Gardali 2008).

The USFWS Information for Planning and Consultation (IPAC) database for the project site and CNDDB were conducted for this site. CNDDB occurrences within one- and five-mile radii of the project site are included on Figure 8. Special-status species with potential to occur at the project site are included in Table 5. Special-status species that are unlikely to occur at the project site are not discussed further. Special-status species that are likely to occur at the project site are discussed under item a) below.

Additionally, IPAC identifies migratory birds that can potentially be impacted by the project. One species was listed as protected by the MBTA that could potentially occur in the region. Impacts to migratory birds, eagles, and their habitats should follow any regulations in place and consider implementing the appropriate mitigation measures. The following bird listed occurs on the USFWS Birds of Conservation Concern (BCC) or warrant special attention in the project location: evening grosbeak (*Coccothraustes vespertinus*). Breeding season for this species is from mid-May to mid-August.

An assessment was completed onsite following the pre-survey review in order to determine potential project impacts to special-status plant and animal species as well as other sensitive natural resources. The findings of the assessment are shown in Table 5 and are incorporated into the responses below.

Table 5B POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES				
Common Name	**Scientific Name**	**Conservation Status** (Fed, State, CDFW)	**Preferred Habitat**	**Known and Potential Occurrence in Project Area**
Birds				
Greater sandhill crane	*Antigone Canadensis tabida*	ST CDFW FP	Marsh and swamp, Meadow and seep, wetlands	**No potential to occur.** The closest occurrence is over 4 miles east of the project area along a riparian corridor. No habitat onsite.
Osprey	*Pandion haliaetus*	CDFW SSC	Riparian forest	**Not likely to occur** due to lack of nesting/foraging habitat onsite.
Bald eagle	*Haliaeetus leucocephalus*	F-DE SE	Lower montane conifer forest, old growth	**Not likely to occur** due to lack of nesting/foraging habitat onsite.
Bank swallow	*Riparia riparia*	ST	Riparian scrub, riparian woodland	**No potential to occur.** No sandy banks or riparian present onsite.
Northern spotted owl	*Strix occidentalis caurina*	ST	North coast coniferous forest, old growth, redwood. High, multistory canopy dominated by big trees.	~~**Potential to occur.** Project could present loss of nesting/foraging habitat.~~ **No potential to occur.** Project site is 8 miles away from Critical Habitat. Nearest recorded observation of NSO is six miles away. Project site and surrounding 1.3 miles lack large diameter trees with multi-layer canopy. Project would not impact nesting/foraging habitat.
Mammals				
Sierra Nevada red fox	*Vulpes vulpes necator*	P-FT ST	Alpine, broadleaved forests, wetlands, and meadow areas, riparian scrub	**No potential** to occur due to lack of habitat onsite. No wetlands onsite, meadows nearby could provide habitat.
Fisher	*Pekania pennanti*	CDFW SSC	North Coast coniferous forest, old growth, riparian forest	**Not likely to occur.** Project site contains human disturbance and only marginal habitat in some portions where tree removal has not occurred.
American badger	*Taxidea taxus*	CDFW SSC	Dry, open stages of shrub and forest with friable soils	**Potential for occurrence** due to suitable habitat.

Table 5B POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES				
Common Name	**Scientific Name**	**Conservation Status** (Fed, State, CDFW)	**Preferred Habitat**	**Known and Potential Occurrence in Project Area**
California wolverine	*Gulo gulo*	P-FT ST CDFW FP	Alpine, moist forested areas, north coast conifer forests	**Potential for occurrence.** Project site contains human disturbance and only marginal habitat in some portions where tree removal has not occurred.
Long-eared myotis	*Myotis evotis*	--	All brush, woodland, and forest habitats to ~9,000 feet. Prefer coniferous woodlands and forest. Caves used primarily as night roosts.	**Potential for occurrence**. Project site contains human disturbance and only marginal habitat in some portions where tree removal has not occurred.
Amphibians and Reptiles				
California red-legged frog	*Rana draytonii*	ST	Aquatic	**No potential to occur.** No water onsite.
Invertebrates				
Shasta crayfish	*Pacifastacus fortis*	FE SE	Aquatic	**No potential to occur.** No water onsite.
Conservancy fairy shrimp	*Branchinecta conservation*	FE	Vernal pools	**No potential to occur.** No water onsite.
Plants				
Lassen paintbrush	*Castilleja lassenensis*	1B.3:	Meadow and seep, subalpine conifer forest	~~**Potential to occur. No impact with implementation of MM-BIO-2.**~~ **Potential to occur** on rocky soils in disturbed and undisturbed areas. **No impact.** Determined to be absent from site during protocol-level surveys.
Jepson's dodder	*Cuscuta jepsonii*	1B.2	Broadleaved upland forest, lower montane conifer forest, upper montane conifer	~~**Potential to occur. No impact with implementation of MM-BIO-2.**~~ **Potential to occur** on *Ceanothus prostrates* which is present in patches onsite. **No impact.** Determined to be absent from site during protocol-level surveys.

Table 5B POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES				
Common Name	**Scientific Name**	**Conservation Status** (Fed, State, CDFW)	**Preferred Habitat**	**Known and Potential Occurrence in Project Area**
Long-haired star tulip	*Calochortus longebarbatus* var. *longebarbatus*	1B.2	Great basin scrub, lower montane coniferous forest, meadow and seep, vernal pool, wetland	**No potential to occur** due to lack of habitat onsite. No vernal pools onsite.
Long-leaved starwort	*Stellaria longifolia*	2B.2	Bog and fen, meadow and seep, riparian woodland, upper montane conifer forest, wetland	**No potential to occur.** No vernal pools onsite.
Slender Orcutt grass	*Orcuttia tenuis*	1B.1	Dependent on vernal pools. Possible in natural and artificial wetlands such as stock ponds and borrow pits.	**No potential to occur.** No vernal pools onsite.
English sundew	*Drosera anglica*	2B.3	Bog and fen, meadow and seep, wetland	**No potential to occur.** No wetlands onsite.
Profuse-flowered pogogyne	*Pogogyne floribunda*	4.2	Meadow and seep, vernal pool, wetland	**No potential to occur.** No wetlands onsite.
Woolly meadowfoam	*Limnanthes floccose* ssp. *floccosa*	4.2	Vernal pool, wetland	**No potential to occur.** No wetlands onsite.
Tufted loosestrife	*Lysimachia thyrsiflora*	2B.3	Meadow and seep, Vernal pool, wetland	**No potential to occur.** No wetlands onsite.
Red bluff dwarf rush	*Juncus leiospermus* var. *leiospermus*	1B.1	Meadow and seep, Vernal pool, wetland	**No potential to occur.** No wetlands onsite.
Fishes				
Rough sculpin	*Cottus asperrimus*	ST CDFW FP	Aquatic	**No potential to occur.** No water onsite.
Pit-Klamath brook lamprey	*Entosphenus lethophagus*	CDFW SSC	Aquatic	**No potential to occur.** No water onsite.
Conservation Status – FT = Federal Threatened, FE = Federal Endangered, P = Proposed, ST = State Threatened, SE = State Endangered, CDFW SSC – Special Species of Concern, CDFW FP – Fully Protected, C = Candidate				

Discussion

a) The CNDDB query for the one- and five-mile buffer found that 15 animal species and 10 plant species occur in the general project area. Of the 25 special-status species evaluated, several were determined to have a potential to occur, while the rest were determined to have no potential to occur. Impacts to special-status species determined to have potential to occur within the project area are discussed below, while species that were determined to be absent are not discussed further.

Special-status species that are known to occur, or have the potential to occur, within the project area include:

- American badger (*Taxidea taxus*)
- California wolverine (*Gulo gulo)*

- ~~Northern spotted owl (*Strix occidentalis caurina*)~~
- Long-eared myotis *(Myotis evotis)*
- Lassen paintbrush (*Castilleja lassenensis*)
- Jepson's dodder (*Cuscuta jepsonii*)

Mammals

American Badger
State Species of Special Concern
The American badger (*Taxidea taxus*) is an uncommon permanent resident of California, most commonly found in grassland, shrub land, agricultural, and woodland edge habitats with friable soils. Dry, friable soils, often sandy, are required because badgers eat mostly fossorial (i.e. occurring underground) rodents, and they also take cover and reproduce in burrows. Badgers are active both day and night and may undergo periods of torpor in the winter. The American badger is listed by the State of California as a Species of Special Concern (SSC). Populations are considered to be fairly stable but have declined due to historical trapping, conversion of habitat to intensive agriculture, and rodent poisoning.

There is a recorded occurrence for American badgers within five miles of the project area in the CNDDB. There is suitable habitat within the open shrub land of the project area and surrounding areas. No American badgers, signs of badgers, or burrows were observed during the site survey. The project includes development of the project site and will result in removal of suitable habitat for this species. Habitat impacts to American badgers will be less-than-significant due to the abundance of suitable habitat in the surrounding areas; however, direct mortality or injury could occur if individuals enter the project site during construction or operation of the project. Implementation of **Mitigation Measure (MM) BIO-4** is included to prevent injury or mortality to individuals during construction and operation of the project. Impacts to American badger will be **less-than-significant with mitigation incorporation**.

California Wolverine
Proposed Federally Threatened; State threatened; State Fully Protected
The California wolverine (*Gulo gulo*) is state listed as threatened in California, where the species is normally found in higher-elevation mixed conifer forests with seasonal snowfall in the Northern Sierra Nevada (CDFW, 2021). The species usually have a diet of small mammals and hunt in open areas contiguous to mixed conifer forests where the forest cover provides suitable den habitat. Wolverines typically breed from late spring to early fall and utilize birthing dens that are buried in the snow. California wolverines tend to avoid human disturbance and can range large distances within suitable habitats. Within the project site is suitable conifer forest habitat, although most of the project site is heavily disturbed and has experienced frequent human disturbance.

There is a recorded occurrence for the California wolverine within one mile of the project area in the CNDDB. There is potentially suitable habitat within the surrounding areas; however, wolverines are unpredictable in where they occur. No California wolverines were observed during the site visit and the species typically stay in very remote areas away from human activity. The northern portion of the project site contains suitable habitat for this species. Removal of this habitat for development of the project is not anticipated to have a significant impact to California wolverine as the habitat on the project site is limited and wolverine are not likely to use the area

due to human activity and noise occurring at the adjacent Burney Disposal Transfer Station. The California Department of Fish and Wildlife (CDFW) provided informal consultation comments regarding the potential for wildlife entrapment during construction. **MM BIO-4 and MM BIO-5** are included to ensure direct injury or mortality does not occur if individuals are encountered during construction or ongoing operations of the facility and to prevent entrapment in excavated trenches during construction. Impacts to California wolverine will be **less-than-significant with mitigation incorporation**.

California Bat Species: Long-Eared Myotis

Bureau of Land Management–Sensitive (BLM:S), IUCN-Least Concern (IUCN:LC), Western Bat Working Group- Medium Priority (WBWG:M)

Long-eared myotis typically roost in tree cavities and beneath exfoliating bark in both living trees and dead snags. Pregnant females often roost at ground level in rock crevices, fallen logs, and even in the crevices of sawed-off stumps, but are frequently unsuccessful rearing young in such vulnerable locations. The project site contains potential roosting habitat for this species in a portion of the site where tree removal has not yet occurred.

Removal of remaining trees within the project area during construction of the project could result in direct mortality or disruption of individual tree-roosting bats during tree removal. Prior to additional tree removal at the site, **MM BIO-3** below will be implemented to reduce tree-removal impacts to long-eared myotis. With incorporation of this measure, direct impacts to long-eared myotis will be **less-than-significant with mitigation incorporated.**

The proposed development would cause a long-term increase in noise and light levels on the property. The existing industrial operations in the area are a source of noise and human presence during daytime hours and likely already influence bat roost selection. During ongoing operations bats may select roost and foraging sites in the surrounding undisturbed area, both on the property and on the surrounding rural properties, where natural noise buffers (i.e. dense forest canopy) will not be disturbed.

Increased noise sources at night during the ongoing operations onsite has the potential to interfere with bat echolocation or foraging behavior. Light sources may occur at crepuscular hours when bats are typically foraging. As required by Shasta County design standards, illumination from the facility will be directed downward such that the light will likely not impact surrounding where bats may be foraging. Lighting has the potential to impact prey behavior because prey items such as moths and nocturnal insects are drawn to light. Lighting at the site may provide increased foraging opportunities due to attracting prey items. Indirect project impacts to bat foraging behavior during long-term operations will be **less-than-significant**.

Plants

~~No special-status plant species were observed during a site visit was conducted by a qualified VESTRA Biologist in April of 2021. The project site contains habitats that have the potential to support special-status plant species: Lassen paintbrush (*Castilleja lassenensis*) and Jepson's dodder (*Cuscuta jepsonii*). These species could occur within the currently disturbed areas of the site. They could also be present within the areas where ground disturbance has not yet occurred. Prior to ground disturbance at the project site, **MM BIO-2** will be implemented to verify the absence of sensitive plant species at the project site. The California Department of Fish and Wildlife (CDFW)~~

~~provided informal consultation comments regarding the proposed mitigation measure which have, in part, incorporated therein. Should the presence of sensitive species be identified, measures will be implemented by the applicant to avoid or mitigate these species to ensure impact will be less-than-significant. With the implementation of **MM BIO-2**, impacts to special-status plant species will be **less-than-significant with mitigation incorporation.**~~

Lassen paintbrush

Lassen paintbrush (*Castilleja lassenensis*) was determined to have habitat present in the currently disturbed areas of the site due to the rocky exposed soils. On August 22, 2023, a protocol-level botanical survey was completed within the project area. The disturbed areas onsite were observed to be bare soils that lacked vegetation other than sunflower (*Helianthus annuus*). Therefore, no impacts to Lassen paintbrush would occur because it is not present onsite.

Jepson's dodder

Jepson's dodder is a parasitic plant which specifically uses pine mat ceanothus as a host plant, from which it steals nutrients. It is an orange-colored leafless herb with cord-like growth, which grows over its host plant. Jepson's dodder was determined to be potentially occurring because of the presence of pine mat ceanothus (*Ceanothus prostatus*) in undisturbed areas onsite. On August 22, 2023, a protocol-level botanical survey was completed within the project area. Transects were walked across the site wherever ground disturbance is proposed to search for pine mat ceanothus. Once pine mat ceanothus was observed, the plant was inspected for presence of Jepson's dodder. While several Ceanothus patches were observed, no dodder species were present onsite. Therefore, no impacts to Jepson's dodder would occur because it is not present onsite.

The California Department of Fish and Wildlife (CDFW) provided informal consultation comments regarding the proposed mitigation measure which have, in part, incorporated therein. Should the presence of sensitive species be identified, measures will be implemented by the applicant to avoid or mitigate these species to ensure impacts will be less-than-significant. With the implementation of **MM BIO-2,** impacts to special-status plant species **will be less-than-significant with mitigation incorporation.**

Birds

Northern Spotted Owl

Federally and State Threatened

The forested areas within the project site on the western portion and a small stand within the northern portion could present potential foraging habitat for the northern spotted owl (NSO). The majority of the project site lacks habitat for NSO entirely due to heavy human disturbance and the previous clearing of vegetation. The stands within the project area do present potential habitat; however, the ponderosa pine stands are relatively young and lack the specific characteristics for NSO nesting and foraging habitat. Additionally, the site has evidently been disturbed and surrounded by abundant human presence for decades; the surrounding properties are developed as agricultural or industrial facilities, SR-299 runs adjacent to the southeastern boundary of the property, and the town of Burney is located nearby.

However, the NSO has a substantial amount of preferable habitat in the regional area that does not present as having much noise or human activity. The nearest recorded observation of NSO to the site is approximately six miles, according to the CNDDB Spotted Owl Viewer. Critical

Habitat for NSO occurs approximately eight miles east of the site, according the USFWS Critical Habitat Mapper. This area provides habitat that includes key habitat including dense, multi-layer canopy with large-diameter conifers.

In general, increased light and noise levels resulting from nighttime industrial operations have the potential to interfere with nesting behaviors of birds. According to the USFWS, indirect disturbance to NSO may reach the level of take when at least one of the following conditions is met:

- Project-generated sound exceeds ambient nesting conditions by 20-25 decibels (dB);
- Project-generated sound, when added to existing ambient conditions, exceeds 90 dB;
- Human activities occur within a visual line-of-sight distance of 330 feet or less from a nest (USFWS 2020).

The facility will be designed following a noise attenuation study in order to meet Shasta County noise standards for ongoing noise generation, which requires that noise levels do not exceed 50 dB during nighttime operations as detected from approximately 1,600 feet away from the facility at the northern property line of the closest residence to the project site on Cornaz Drive or at the southern property line of the rural residential property approximately 1,700 feet north of the project site. This requirement is included as Mitigation Measure **MM NOI-2** included in Section XIII. Because the nearest documented suitable habitat for NSO is at least five miles feet away from the site, the project design features to reduce noise and lighting would ensure that noise levels are well below the above-listed conditions for impacts to NSO or their habitat. Therefore, impacts to NSO would be **less-than-significant with mitigation incorporation.**

Birds

Nesting Migratory Passerines and Raptors

Removal of nesting habitat would occur during site development. All raptors and migratory birds, including common species and their nests, are protected from "take" under the California Fish and Game Code Section 3503 and 3503.5 and Federal Migratory Bird Treaty Act. Additionally, IPAC identifies migratory birds that can potentially be impacted by the project. One species was listed as protected by the MBTA that could potentially occur in the region. Impacts to migratory birds, eagles, and their habitats should follow any regulations in place and consider implementing the appropriate mitigation measures. Migratory birds that are also USFWS Birds of Conservation Concern (BCC) or warrant special attention in the project location: evening grosbeak (Coccothraustes vespertinus). The breeding season for this species is from mid-May to mid-August. ~~Removal of nesting habitat would occur during site development.~~

A tree stand dominated by ponderosa pine is located on the northern portion of the project site which could provide habitat for songbirds and raptors. The ponderosa pine habitat onsite may provide nesting opportunities. Ponderosa pine habitat proposed to be developed is approximately 20 acres and is surrounded by SR-299 to the east and the Burney Disposal Transfer Station to the north.

Most of the project site has already been deforested, and currently is characterized by vegetation such as grasses and scattered rabbitbrush and a few manzanita shrubs, with shrubs clustered at the

eastern end of the property where the boundary abuts SR-299. Due to the sparse growth of the shrubs and their proximity to the highway, this area provides only marginal nesting habitat.

Construction of the project could result in direct injury or mortality to birds if tree removal occurs during the nesting season. Impacts to nesting birds can be avoided by completing nest surveys prior to completing activities that could disturb nesting birds per **MM BIO-1** (Shuford and Gardali 2008). The California Department of Fish and Wildlife (CDFW) provided informal consultation comments regarding the proposed mitigation measure which have been incorporated therein. Should a site survey detect nesting raptors or migratory songbirds close to the project area, appropriate spatial and temporal buffers will be implemented. Impacts to raptors or migratory birds will be **less-than-significant with mitigation incorporation.**

The proposed development would cause a long-term increase in noise and light levels on the property. Raptor species (birds of prey) and migratory birds may nest in trees and other vegetation located within or in the immediate vicinity of the study area. Like the proposed project site, the surrounding properties are industrial sites surrounded by corridors of marginal nesting habitat. Due to the existing industrial sites that have surrounded this forested area for several decades, nesting birds in the area are likely acclimated to human presence and noise levels onsite. Therefore, indirect impacts from noise would likely be less-than-significant.

In general, increased light and noise levels resulting from nighttime industrial operations has the potential to interfere with nesting behaviors of birds within several hundred feet of the source (FHWA 2006). Industrial practices have existed in the area historically, although currently there are no industrial operations that occur during nighttime hours in the area Some existing noise and light are currently generated at night by vehicle traffic on nearby SR-299.

The proposed ongoing 24-hour operations onsite would result in increased noise and light levels onsite. The nighttime noise associated with ongoing operations of the facility would introduce noise that is different in frequency, duration, and volume than current noises in the area. Additionally, the operations would generate increased traffic on SR-299. Illumination from the facility will be directed downward such that the light will likely not impact the potential nesting habitat surrounding the facility.

As required by **MM NOI-2** included in Section XIII of the IS/MND, the facility will be designed to reduce noise from operation of the bioenergy facility to meet Shasta County noise standards and/or minimize any significant increase in ambient noise that may result from its operation ~~for ongoing noise generation~~, which would ensure that noise levels do not exceed 50 dB and/or increase existing ambient noise levels by greater than 5 dB at a distance of 1,600 feet during nighttime operations. Studies have found that the adverse impacts of noise levels generated by traffic become significant at 50 dB or higher and that effects of noise-generating activities are less for sites that are adjacent to roadways, since the likelihood for birds to occur increases with the distance from the roadway (Caltrans 2016). Therefore, the project design to reduce noise levels to 50 dB or less would be sufficient to avoid impacts to birds.

The California Department of Fish and Wildlife (CDFW) provided informal consultation comments regarding the effect of lighting on wildlife. As required by Shasta County general development standards, all lighting, exterior and interior, shall be designed and located to confine direct lighting to the premises, and the light source shall not shine upon or illuminate directly on

any surface other than the area required to be lighted. With project design features to reduce the noise and lighting pollution from ongoing activities, the proposed ongoing activities would have a **less-than-significant impact with mitigation incorporation** on nesting birds.

Nocturnal Wildlife

There will be increased potential for nocturnal wildlife to experience collisions with project-related vehicles due to the increased traffic on SR-299 that would be generated during construction and ongoing operations. Highway traffic collisions will be addressed through educating employees about the potential for encountering wildlife on roadways during early morning and evening hours per **MM BIO-6**.

b-c) **No Impact.** There are no wetlands or riparian habitats on or near the project site. There are no sensitive natural communities on the project site or in the project area.

d) **No Impact.** There are no known significant wildlife migration corridors in the project area. There are no streams on or near the site. Because the site is surrounded by SR-299, Black Ranch Road, adjacent agriculture fields, and industrial and commercial developments, the site does not occur within a high-quality migratory route or nursery site for native wildlife.

e-f) **No Impact.** A review of Section 6.7 of the Shasta County General Plan indicates that the proposed project would not conflict with the Shasta County objectives or policies for Fish and Wildlife Habitat. The project would not interfere with any adopted Habitat Conservation Plans, Natural Community, Conservation Plans, or other approved local, regional, or State habitat conservation plans or ordinances to protect biological resources applicable to the project area.

Biological Resources Mitigation Measures

The following mitigation measures are required to reduce the impacts of the project to special-status species to be less-than-significant. In addition, Mitigation Measure **(MM) NOI-2** included in Section XIII requires noise levels generated by the bioenergy facility to be less than 50 dB 1,600 feet from the project site.

> **MM BIO-1***:* S**urveys for nesting birds if tree removal at the project site occurs within nesting season.**
> In order to avoid impacts to nesting migratory birds and/or raptors protected under federal Migratory Bird Treaty Act and California Fish and Game Code Section 3503 and Section 3503.5, including their nests and eggs, one of the following shall be implemented:
> a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or
> b. If vegetation removal or ground disturbance activities occur during the nesting season (February 1 through August 31), a pre-construction nesting survey shall be conducted by a qualified biologist within 14 days of vegetation removal or construction activities. If an active nest is located during the preconstruction surveys, a non-disturbance buffer shall be established around the nest by a qualified biologist in consultation with the Department of Fish and Wildlife (CDFW). No vegetation removal or construction activities shall occur within this non-disturbance buffer until the young have fledged, as determined through

additional monitoring by the qualified biologist. The results of the pre-construction surveys shall be sent electronically to CDFW at R1CEQARedding@wildlife.ca.gov

MM BIO-2: Surveys for special-status plants prior to additional ground disturbance.

~~Prior to ground disturbance at the project site, the applicant shall retain a qualified Biologist to conduct protocol-level surveys during the appropriate flowering window for Lassen paintbrush (*Castilleja lassenensis*) and Jepson's dodder as well as a general floristic survey to determine whether any other special status plant species that are not known to occur in the vicinity and/or for which no potential habitat was observed during the site visit was conducted by a qualified VESTRA Biologist in April of 2021.~~ If new ground disturbance occurs within habitat for Lassen paintbrush or Jepson's dodder five or more years following completion of the August 2023 botanical survey, then the applicant shall retain a qualified Biologist to conduct protocol-level surveys during the appropriate flowering window for the species. Surveys shall comply with survey protocols for plants species listed under the California Endangered Species Act and Federal Endangered Species Act and the California Department of Fish and Wildlife (CDFW) March 20, 2018, *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. A report summarizing the findings of surveys will be prepared and submitted to the County and CDFW. In the event sensitive species are identified on the project site, the plants should be marked by a qualified biologist familiar with the species and the Biologist shall consult with CDFW and the U.S. Fish and Wildlife Service (USFWS) to determine appropriate measures to reduce the impact of identified species to a less-than-significant level, including but not limited to, the establishment of an avoidance buffer around the plant(s) that is adequate to prevent direct and indirect disturbance to the plant(s). Fencing shall be installed at the perimeter of the buffer area and shall be maintained by the operator. If avoidance is not possible, the biologist will be contacted to coordinate seed collection from the plant(s) for propagation and restoration on-site, in consultation with CDFW. Other mitigation, including but not limited to conservation, establishment, or restoration of the species off-site, may be required if seed collection or onsite propagation is not possible. The final survey report, including if necessary, a written description of the required measures(s) and site plan showing the location of the special status plant(s) and measures shall be provided to the Shasta County Planning Division, CDFW, and USFWS prior to initiation of ground disturbing activities.

MM BIO-3: Preconstruction surveys for long-eared myotis prior to tree removal at the site.

In order to avoid impacts to bats, the following shall be implemented:

a. Conduct removal and disturbance of trees outside of the bat maternity season and bat hibernacula (September 1 to October 31); or

b. If removal or disturbance of trees will occur during the bat maternity season, when young are non-volant (March 1 - August 31), or during the bat hibernacula (November 1 - March 1), large trees (those greater than 6 inches in diameter) shall be thoroughly surveyed for cavities, crevices, and/or exfoliated bark that may have high potential to be used by bats within 14 days of tree removal or disturbance. The survey shall be conducted by a qualified biologist or arborist familiar with these features to determine if tree features and habitat elements are present. Trees with features potentially suitable for bat roosting

should be clearly marked prior to removal and humane evictions must be conducted by or under the supervision of a biologist with specific experience conducting exclusions. Humane exclusions could consist of a two-day tree removal process whereby the non-habitat trees and brush are removed along with certain tree limbs on the first day and the remainder of the tree on the second day.

MM BIO-4: Stop work if individuals are encountered.
If any special-status mammal or other wildlife is observed within the project site during construction or operation of the project, activities with the potential to impact the animal will cease until the animal has moved out of harm's way on its own accord.

MM BIO-5: Provide escape from trenches and/or excavation areas.
Prior to stopping work each day any open trench and/or excavation areas shall be covered securely, or a wildlife exit ramp shall be provided in the trench to prevent entrapment, and any pipes left out onsite shall be inspected for wildlife prior to burying, capping, moving or filling. Dimensions of the ramps shall be a minimum of 12 inches wide and will not exceed a 2:1 slope.

MM BIO-6: Education program to prevent nighttime traffic collisions.
Employees who will be responsible for driving to/from the facility during nocturnal hours will receive awareness training about the potential for wildlife encounters while driving at night.

V. CULTURAL RESOURCES Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Setting

California Register of Historical Resources (CRHR)
According to Section 15064.5 of CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Lead agencies are required to identify any historic resources that may be affected by any undertaking involving state or county lands, funds, or permitting. Furthermore, the significance of such resources that may be affected by the undertaking must be evaluated using the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852).

Public Resources Code Section 5024
As set forth in Section 5024.1 (C) of the Public Resources Code, for a cultural resource to be deemed "important" under CEQA and thus eligible for listing on the CRHR, it must meet at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

The eligibility of archaeological sites is usually evaluated under Criterion (4) – its potential to yield information important to prehistory or history. Whether a site is considered important is determined by the capacity of the site to address pertinent local and regional research themes. Prehistoric sites can be eligible under any of the four criteria in addition to built-environment eligibility if multi-component in nature.

Discussion

An Archeological Survey Report (ASR) and Historic Resource Evaluation was prepared for the project by Alta Archaeological Consulting (ALTA). Archaeological field surveys were completed on April 21, 2021, and July 12 and 13, 2022, to identify cultural resources within the project area. No cultural resources were identified within the project area as a result of the records search or outreach to native American Organizations. The literature review revealed the presence of a historic-era railroad yard at the project site. Additionally, the field survey revealed the presence of two isolated obsidian artifacts within the project site. ALTA determined the isolated finds do not possess enough data potential or historical context to meet the threshold of potentially significant historic resources. The historic-era railroad yard consists of a depot building, engine house, section shed, and remnant tracks. The Historic Resource Evaluation completed by ALTA determined the rail yard does not meet the criteria for eligibility for the California Register of Historical Resources (CRHR).

a-c) As discussed above the two isolated finds within the project site do not possess enough data potential or historical context the meet the threshold of potentially significant historic resources. The railroad yard, including the depot, engine house, section shed, and remnant tracks, were evaluated to determine if the property is eligible for listing in the CRHR. The railroad yard was determined to be ineligible for the CRHR.

Although there is no evidence to suggest that the project would result in any significant effect to archaeological, historical, or paleontological resources, there is always the possibility that such resources could be encountered. Therefore, a condition of project approval will require that if, in the course of development, any archaeological, historical, or paleontological resources are uncovered, discovered or otherwise detected or observed, development activities within 100 feet of the affected area shall cease and a qualified archaeologist shall be contacted to review the site and advise the County of the site's significance. If the findings are deemed significant by the Environmental Review Officer, appropriate mitigation shall be required.

Pursuant to California Health and Safety Code Section 7050.5, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site until the coroner has determined if the remains are subject to his or her authority. If the coroner determines that human remains are not subject to his or her authority and recognizes or has reason to believe the remains to be those of a Native American, he or she shall contact the Native American Heritage Commission within 24 hours.

The project will not result in impacts to known historical, archaeological resources, cultural resources or human remains. **Less-than-significant**.

Mitigation Measures: None proposed.

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 operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Setting

Shasta County does not currently have a renewable energy or energy efficiency plan. The Energy Element of the Shasta County General Plan contains the following objectives related to energy.

> **E-1** Promote energy savings by integrating transportation, land use, and air quality planning;
>
> **E-2** Increase utilization of renewable energy resources by encouraging development of solar, hydroelectric, biomass, waste-to-energy, and cogeneration sources;
>
> **E-3** Promote energy education and information as a way of assisting the public in making informed decisions regarding energy efficiency; and
>
> **E-4** Conserve renewable energy resources, specifically raw materials, transportation fuels, and resource land.

In addition to these goals, several policies related to energy are included in the Energy Element. The policies applicable to the project include:

> **E-d** Priority shall be given to energy projects and programs that provide jobs and other economic benefits within the County for County residents.
>
> **E-i** The County should support efforts to amend California's timber harvest rules that encourage thinning and harvest of biomass fuels for purposes of improving wildland fire protection and forest productivity in developed areas, such as in the Shingletown area, and which are capable of timber production.

Discussion

a) The project will require use of energy (fuel) during construction of the facility and during operation of the project to transport woody biomass for the bioenergy facility and logs for the wood product operations to the project site. In addition, operation of mobile equipment for project operations will require the use of fuel. The bioenergy facility will supply heat for the dry kiln building via overhead piping. Electricity produced by the facility will be used at the project

site and sold to PG&E and nearby property owners.

Compliance with local, State, and Federal regulations (e.g. limit engine idling times, requirement for the recycling of construction debris, etc.) would reduce and/or minimize short-term energy demand during construction to the extent feasible. Construction would not result in a wasteful or inefficient use of energy. Feedstock for the bioenergy facility and merchantable logs for the sawmill will be provided by Tubit Enterprises, Inc., a local logging and chipping company located in Burney. It is anticipated the bioenergy facility and sawmill will use feedstock and logs from local sources and other sources in northern California. The use of fuel to transport feedstock and logs to the facility would not be wasteful, inefficient, or unnecessary. The project includes minimal mobile equipment requiring fuel. This impact is **less-than-significant**.

b) The project will result in the generation of energy by converting raw forest biomass to renewable heat and electricity. The project will provide additional jobs and revenue to the area. The project is consistent with Shasta County General Plan Objective E-2 as well as Policy E-d. The project will not conflict or obstruct Shasta County goals and policies related to renewable energy or energy efficiency and would support State goals and policies related to renewable energy. **No impact**.

Mitigation Measures: None proposed.

VII. GEOLOGY AND SOILS Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Setting

Shasta County contains Quaternary faults in the eastern and southern portion of the county. Quaternary faults have had movement within the last two to three million years. The state of California Division of Mine and Geology considers Quaternary faults to be potentially active. There are active faults in the northeastern portion of Shasta County. The list of normal active faults includes portions of the following faults:

- Southern and eastern portions of McArthur Fault
- Hat Creek Fault
- Pittville Fault
- Rocky Ledge Fault north of Burney and east of Johnson Park

These faults form high, steep rims in the area contained mostly of Pliocene and early Pleistocene volcanic rocks. The largest of these faults is Hat Creek Rim, which is more than 25 miles long and 1,600 feet high. Shasta County has a low level of seismic activity; however, there is stronger seismic activity around Mt. Lassen and in the eastern half of the County. The last volcanic activity in Shasta County was in 1914-1917 when Mt. Lassen erupted.

Landslides occur throughout Shasta County but they are not considered a major problem. They are more prevalent in northern and eastern portions of the county where sedimentary and volcanic rocks are present. Liquefaction is found where water tables are high and those areas of Shasta County are found in the northern central valley region.

The project site lies along the eastern margin of the southern Cascade Arc in eastern Shasta County, California. While bedrock geology is a result of Cascade volcanism, the project site is bound to the east by the Basin and Range physiographic province whose extensional tectonics are the dominant forces shaping the landscape to the east. Bedrock in the vicinity consists of Pliocene to recent basalt flows associated with the volcanic centers of the Cascade Arc to the immediate west (Luedke and Smith 1981). The Cascade Arc is an approximately 1,200-mile long north-south linear trend of volcanoes that runs along the west coast of North America. Volcanism along the arc is driven by the offshore subduction of the east-dipping Juan De Fuca and Farallon Plates under the North American Plate (Wills 1990). The project site is underlain by early Pliocene basalt flows believed to be derived from Hatchet Ridge to the east. These are in turn overlain by a thin cover of Quaternary alluvium (Luedke and Smith 1981). Quaternary to recent lacustrine sediments overlie this alluvium along the western margin of the project site.

According to the NRCS Web Soil Survey, soils at the project site consist mainly of Burney-Arkright complex, 2 to 9 percent slopes. Soils in the Burney-Arkright complex are well drained with medium surface runoff and formed from slope alluvium-derived basalt. The northwest portion of the project site contains Winnibulli loam, 0 to 2 percent slopes. The Winnibulli loam is poorly drained soil with a high surface runoff formed from alluvium derived from igneous rock. Soils within the project site are included on Figure 9.

Discussion

a) i-iiv. The site lies within a seismically active region where compressive stresses related to subduction meet extensional stresses from Basin and Range extension to the east (Wills 1990). Two major fault systems have been mapped within five miles of the project site. The Rocky Ledge Fault Zone is mapped 1.3 miles east of the project site boundary. This Fault Zone is a north-south trending, steeply eastward-dipping normal fault that is down-dropped to the east. The scarp of the fault can be seen as a prominent ledge east of the site along which Rocky Ledge Creek flows (Sawyer and Bryant 1995). The age of most recent movement along the Rocky Ledge Fault is not well constrained; however, based on the presence of closed depressions and fresh boulders within scarp surfaces, the fault is considered Holocene-active (Woodward-Clyde Consultants 1987). Slip rate along the fault is estimated at 0.2-1.0 mm/year (Sawyer and Bryant 1995). Due to the evidence for Holocene rupture along the fault, the trace of the fault has been designated a Special Study Zone under the Alquist Priolo Act. This special study zone and buffer do not extend to the project site. Another unnamed steeply eastward-dipping normal fault is mapped 1.4 miles west of the site. The date of last movement along this fault is not known with certainty but believed to be during the latest Quaternary (Wills 1990). According to the California Department of Conservation Regional Geologic Maps, this site does not contain the potential for landslides, liquefaction, or high soil erosion potential. The project will not result in risk of loss, injury, or death to workers at the project site due to geologic hazards. A Geotechnical Report is being prepared for this site and building design will be in compliance with those recommendations. **No impact**.

b) The project site is flat. Operation of the project will not result in erosion of the project site since most of the site will be gravel and pavement. Construction of the project will result in soil disturbance which could result in erosion if soils are exposed to precipitation. During construction activities, the project will require coverage under the Construction General Permit which requires development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include best management practices (BMPs) to minimize erosion and sediment during construction. Project impacts related to erosion and loss of topsoil will be **less-than-significant**.

c) The project site is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the project. **No impact**.

d) Soils on the project site consist of Burney-Arkright Complex which is a gravelly loam formed from lava plateaus of weathered bedrock and Winnibulli loam which consists of loam and clay loam formed from fan terraces of igneous rock. Two soil series distributed among the soil map units comprise the soil resource. (NRCS 2020). The upland soils have sandy loam to loam textures with varying percentage of rock fragments, are well drained, and have moderately low to high water-storage potential and a medium to high runoff class. These soils are typical for this area and

do not present any unusual problems for management. No expansive soils are located on the project site. **No impact**.

e) Wastewater from the project site will be either conveyed to the wastewater treatment plant located immediately to the north or septic tanks will be used at the project site. If septic tanks are required, a percolation test will be performed to determine suitable locations for septic tanks at the project site. **Less-than-significant impact.**

f) There are no known unique geologic features or paleontological resources at the project site. **No impact**.

Mitigation Measures: None proposed.

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

Setting

The following setting information was obtained from the Air Quality Technical Report prepared by RCH Group for the project:

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC, 2007), with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning, and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The primary GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

CO_2 is primarily generated by fossil fuel combustion in stationary and mobile sources. CH_4 is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. CH_4 is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. N_2O is produced by both natural and human-related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO_2e).

There is international scientific consensus that human-caused increases in GHG have and will continue to contribute to global warming. Potential global warming impacts may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Discussion

a) The project will result in greenhouse gas emissions during construction and operation of the project. As described in the Air Quality Technical Report prepared by RCH Group, 10,000 metric tons of CO_2e per year threshold is used by other air districts for industrial and/or stationary source emissions of GHG. Since the proposed project is an industrial project that includes stationary sources (i.e., diesel generators used for emergency power), the proposed project's GHG emissions were compared to the 10,000 metric tons of CO_2e per year quantitative threshold. The substantial evidence for this GHG emissions threshold is based on the expert opinion of various California air districts, which have applied the 10,000 metric tons of CO_2e per year threshold in numerous CEQA documents where those air districts were the lead agency.

The estimated construction GHG emissions for the proposed project are 3,334 metric tons of CO_2e. Given the two-year construction period, the annual construction GHG emissions for the proposed project are 1,666 metric tons of CO_2e. SCAQMD recommends that amortized GHG emissions (i.e., total construction emissions divided by the lifetime of the project , assumed to be 30 years) be added to operational emissions to evaluate significance. As indicated, the 30-year amortized construction related GHG emissions would be approximately 111 metric tons of CO_2e per year. The results of the comparison are presented in Table 6.

Table 6
ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Construction Year	CO_2e Metric Tons
2023	1,838
2024	1,496
Total Construction Emissions	**3,334**
Total 30-Year Amortized Annual Construction Emissions	**111**

Source: RCH Group, 2021

The estimated operational GHG emissions are presented in Table 7. The estimated operational GHG emissions for the project are 4,982 metric tons of CO_2e. When including the 30-year amortized construction related GHG emissions, the total estimated construction and operational GHG emissions are 5,093 metric tons of CO_2e per year which is below the 10,000 CO_2e per year threshold of significance.

Table 7
ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	CO_2e Metric Tons
Employee Vehicles	40
Off-road Equipment Onsite	104
Offsite Haul Trucks	2,242
Standby Generators	182
Biomass Boiler	2,366
Dry Kiln	-
Grinder	35
Sawmill	14
Total Operational Emissions	**4,982**
Total Construction and Operational Emissions	**5,093**
Potential Total Emissions Avoided	**4,098**
Potential Net Emissions	**995**
Significance Threshold	10,000

Source: RCH Group, 2021

Open burning as a disposal method for non-merchantable biomass generated in the region is common. It is assumed that feedstock sourced from off-site (i.e., not from sawmill residuals) utilized by the biomass boiler would otherwise be open burned. While the level of open burning that would occur on any particular day is unknown, the quantity of biomass that be consumed by the proposed project and, thus, potentially not open burned in the forests, is known. The PG&E carbon intensity factor for 2018 was 206.29 pounds of CO_2e per MWh. Therefore, the project has the potential to have a positive environmental benefit through avoiding the regional emission of up to 4,098 metric tons of CO_2e annually. Therefore, greenhouse gas emissions generated by the

project will have a **less-than-significant impact** on the environment and may have a potential positive environmental benefit.

b) The proposed project would be subject to all applicable permit and planning requirements in place or adopted by the County and the State of California at the time that building permits are issued. The proposed project would be consistent with County plans, policies, and regulations for reduction of GHG. CARB's 2017 Scoping Plan, which details the State's strategy for achieving the 2030 GHG target (EO B-30-15 and SB 32 extended the goals of AB 32 and set a 2030 goal of reducing emissions 40 percent from 1990 levels), states the following regarding biomass utilization:

> "Innovate biomass utilization such that harvested wood and excess agricultural and forest biomass can be used to advance statewide objectives for renewable energy and fuels, wood product manufacturing, agricultural markets, and soil health, resulting in avoided GHG emissions relative to traditional utilization pathways. Associated activities should increase the resilience of rural communities and economies."

The proposed project would be consistent with CARB's 2017 Scoping Plan by avoiding GHG emissions associated with open burning and utilizing biomass to advance statewide objectives for renewable energy. Thus, the proposed project would have a **less-than-significant impact** related to a conflict with a GHG reduction plan.

Mitigation Measures: None proposed.

IX. HAZARDS AND HAZARDOUS MATERIALS Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport/use/disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been	☐	☐	☐	☒

adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Setting

Hazardous materials and waste are substances that are considered toxic, ignitable, corrosive, or reactive (as defined in California Code of Regulations, Title 22, and Sections 66261.20-66261.24). The release of hazardous materials into the environment could contaminate soils, surface water, and groundwater supplies. Under Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) maintains a list of hazardous substance sites. This list, referred to as the "Cortese list," includes CALSITE hazardous materials sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination. DTSC maintains a list of hazardous substances and contaminated sites as part of the EnviroStor database. Waste sites are also overseen by the State Water Resource Control Board (SWRCB) and information is listed on the GeoTracker database. The Shasta County Environmental Health Division (SCEHD) is the Administering Agency with respect to Chapter 6.95 of the California Health and Safety Code (HSC) which regulates businesses that handle hazardous materials or a mixture of hazardous materials in reportable quantities. In accordance with HSC Chapter 6.95 such businesses are required to prepare and implement what is known as a Business Plan for Emergency Response which details a response to a release or threatened release of a hazardous material at the facility and for community right-to-know purposes.

Discussion

a-b) During construction of the project, common hazardous materials used at the project site could include fuel, propane, solvents, lubricating oils, and welding gases. During operation of the project, chemicals used for emissions abatement within the bioenergy facility will be stored onsite. These include ammonia/urea, calcium carbonate, and activated carbon. Chemicals will be stored in tanks within bund walls that will prevent the chemicals from escaping into the environment if the storage tanks leak or burst. In addition, fuel, oil, and hydraulic fluids will be used in equipment at the project site. Biochar and ash generated by the bioenergy facility will be transported from the site. Inert material can be used as road building material. Air pollution control residue will be treated with ammonia/urea and calcium carbonate and transported to a landfill.

A Hazardous Materials Business Plan (HMBP) will be prepared and submitted to SCEHD via the California Electronic Reporting System (CERS) for the project. The HMBP will include a map and inventory of the hazardous materials and wastes at the project site including an Emergency Response and Contingency plan which outlines emergency response, evacuation and containment, and cleanup procedures for the site as well as required training for employees. SCEHD will provide the HMBP information to agencies responsible for the protection of public health and safety of

the environment (e.g. fire departments, hazardous material response teams). The use and storage of hazardous materials and wastes will comply with all applicable local, state and safety standards. Impacts associated with the use, transport, disposal or accidental release of hazardous materials will be **less-than-significant**.

c) Project operations will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. There is no existing or proposed school within one-quarter mile of the project site. The closest schools are in the community of Burney and the nearest school is located approximately 0.64 miles from the project site. **No impact**.

d) A search of the EnviroStor and GeoTracker databases was conducted to identify cleanup sites, permitted sites, or other records for the project site. The closest sites to the project site are located on the PG&E-owned property on the opposite side of Black Ranch Road from the project site. These include a LUST Cleanup site and cleanup program site. Cleanup has been completed on these sites and the cases closed. The project site is not located on sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and will not create a significant hazard to the public or the environment.

The subject parcel has a history of industrial use. The site was vacant until approximately 1955. The parcel was previously owned by the McCloud River Railroad Company (MRRC) and represented the terminus of the line into Burney. The line and buildings were originally constructed in 1955 and included a two-story office building, a single stall engine house, and a variety of storage sheds. No major engine repairs were conducted at the location as these were conducted at the MRRC location in McCloud, California. It was reported that limited maintenance was conducted at the stie. The area was also used as a location for the storage of railroad ties and other materials that were to be hauled on the rail. Most of the yard tracks were removed around 2000 to make way for a power-boosting station for a fiber optic cable that was being installed through the area.

A Phase 1 Environmental Site Assessment and a Limited Phase II Site Assessment of the rail line including the subject properties was completed in February 2011 in preparation of the property to be donated to the Shasta Land Trust. The investigation identified a limited number of lubricator house locations along the rail line where hydrocarbon concentrations exceeded Environmental Screening Levels or ESLs. ESL is the limit that is identified where removal action may be evaluated. Limited soil removal was conducted at 17 lubricator house locations. No sampling or removal was conducted on the subject parcel. No other recognized environmental conditions were identified in connection with the subject parcel. A recognized environmental condition refers to the presence, or likely presence, indicating an existing release, past release, or material threat of a release, of any hazardous substances or petroleum products into structures on a property or into the ground, groundwater, or surface water of a property. However, limited areas along the rail line contained elevated levels of hydrocarbon compounds and limited removal was undertaken along the rail line that was to become a public access trail.

During the Phase I Environmental Site Assessment, the former engine house was observed to contain debris including rusted metal 55-gallon drums, plastic oil containers, and old metal rails located outside of the building. The inside of the building contained various debris including 55-gallon metal drums. The floor of the building was difficult to observe as it was littered with wood chips and debris but was wood planks with concrete vault. The site was not sampled during the

Limited Phase II Site Assessment. Any hazardous material that may still be located on site would be limited to hydrocarbon compounds in the vicinity of the engine house that would be limited in extend and degrade naturally over time. **No impact**.

e) There is no airport in the vicinity of the project. The closest airport is in Fall River Mills, approximately 14 miles away off SR-299 East. The project will not result in a safety hazard related to airports for the people working in the project area. **No impact**.

f) The project site will be accessed from entrances off of Black Ranch Road. The project will not interfere with any emergency response plan or evacuation plan. **No impact**.

g) The project includes potential fire sources including the bioenergy facility, equipment operation, and storage of feedstock and lumber that could act as fuels. The project site is adjacent to forest stands and has the potential to increase risk of wildland fires in the area. The project includes measures to decrease fire risk at the project site including a zoned sprinkler system and temperature detection system within the bioenergy facility. Feedstock will be managed in accordance with the requirements of California Fire Code including limits on the size and heights of feedstock piles. California Fire Code contains additional requirements for mills, lumber storage, and wood chip storage. Compliance with the California Fire Code requirements and Shasta County Fire Safety Standards, including the installation of fire hydrants to serve the facility, will ensure impacts related to wildland fires will be **less-than-significant**.

Mitigation Measures: None proposed.

X. HYDROLOGY Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would	☐	☐	☒	☐
i) result in substantial erosion or siltation on or offsite;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result	☐	☒	☐	☐

in flooding on or offsite?				
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk of release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Setting

There are no streams or surface waters located within the project site. As shown on Figure 10, the closest surface water to the project site is an irrigation canal 0.35 miles to the west which diverts water from Burney Creek for irrigation. The main channel of Burney Creek is 1.3 miles west of the project site. The project site is not located within a flood zone or a floodway.

The southern portion of the project site is located within the Burney Water District. Water provided by the Burney Water District comes from deep wells located with the Burney Creek Valley Groundwater Basin.

Discussion

a) Construction of the project could result in temporary surface water quality impacts if soils disturbed during construction are exposed to precipitation. The project site is greater than one acre in size and will require coverage under the Construction General Permit Order 2009-0009-DWQ during construction activities, as indicated in informal consultation comments from the State of California Central Valley Regional Water Quality Control Board (Regional Board). The Construction General Permit requires development of a SWPPP which will include Best Management Practices (BMPs) to minimize erosion and sediment during construction. These BMPs will ensure construction will not substantially degrade surface water quality. Following construction of the project, operations will require coverage under the *General Permit for Storm Water Discharges Associated with Industrial Activities* (IGP). Industrial stormwater discharges from the site will be required to comply with all requirements, provisions, limitations, and prohibitions in the permit to control pollutants in stormwater discharged from the project site.

The applicant plans to dispose 3,552 gallons of industrial wastewater per day (blowdown water and reverse osmosis wastewater) from the bioenergy facility at the adjacent wastewater treatment plant; however, if onsite disposal or treatment of industrial wastewater is conducted onsite or if log watering occurs, Waste Discharge Requirements (WDR) issued by the Regional Board will be required, as indicated in informal consultation comments from the State of California Central Valley Regional Water Quality Control Board (Regional Board). Waste discharge requirements adopted under the WDR program protect surface water by either prescribing discharge of a pollutant to Waters of the U.S. or prescribing requirements for discharge land. WDRs protect

groundwater by prescribing waste containment, treatment, and control requirements. The applicant will be required to obtain the applicable permits from the Regional Board if determined to be required.

Compliance with these permits will ensure the project does not substantially degrade surface or groundwater quality or violate water quality standards or waste discharge compliance. Project impacts will be **less-than-significant**.

b) The project will require the use of water within the bioenergy facility, dry kiln, and sawmill and for dust suppression onsite. Water may also be used to water logs. The project is anticipated to require 16,336 gallons per day of water at peak operation. Water service for the project will be supplied by the Burney Water District which is sourced from groundwater wells. The District is responsible for review of water supplies prior to approving the water supply for the project. The District has indicated they will provide service to the project. The project will increase the area of impervious surfaces at the project site. Stormwater from the project site will flow in the same general direction as existing topography and will be conveyed to a drainage swale that will be constructed on the western boundary of the project site. The project will not interfere with groundwater recharge within the basin. The project will not substantially decrease groundwater supplies or interfere with groundwater recharge such that the project would impede sustainable groundwater management of the basin. **Less-than-significant impact.**

c) The project site does not contain rivers, streams, or other surface waters. The project will result in the addition of impervious surfaces at the project site. The bioenergy facility will be located on a concrete pad and housed in an enclosed structure and the remainder of the project site will either be paved or surfaced with gravel.

- **i)** The project could result in short-term erosion or siltation during project construction. The project site is flat and the closest surface water is more than 0.35 miles from the project site; therefore, the potential for erosion or siltation to leave the project site is low. The project will disturb more than one acre of soil during construction and will require coverage under the Construction General Permit. The Construction General Permit requires the development of a SWPPP that will contain BMPs to minimize polluted runoff during construction. Operation of the project will not result in erosion or siltation since much of the project site will be paved. During operation, project stormwater discharges will be managed in accordance with the Industrial Permit for Stormwater Discharges Associated with Industrial Activities. In addition, a permanent erosion and sedimentation control plan will be required for grading review by the County. Impacts related to erosion and siltation onsite and offsite will **be less-than-significant.**
- **ii)** The project could result in an increase in the rate and amount of surface runoff since it includes development of the project site with impervious surfaces. Stormwater runoff from the project site will be conveyed to a drainage swale that will and convey runoff to a vegetated infiltration basin.. The State of California Department of Transportation (Caltrans) provided feedback during an agency informal consultation for the project in which a drainage report was requested because it maintains drainage facilities along the State Highway 299 that could be impacted by the project. While the project is not located in an area regulated by the county's MS4 stormwater permit, a permit that requires the county to manage and regulate discharges from the county's municipal stormwater system,

the applicant used the MS4 Post Construction Worksheet methodology to provide preliminary hydrological calculations and estimate the effectiveness of the proposed vegetative infiltration basin. The preliminary estimate indicates that the proposed vegetative infiltration basin would, reduce post project stormwater run-off by approximately 125% based on a design storm of representing the Shasta County 85th percentile average 24-hour rainfall event. Percentile average rainfall event is a typical metric used to determine stormwater quality design volume for low impact stormwater conveyances and BMPs. Additionally, the applicant has indicated that any discharge from the proposed vegetative infiltration basin would be directed to county drainage facilities along Black Ranch Road and that these facilities flow north away from the Caltrans facilities. Nonetheless, a final drainage plan will be required to demonstrate that the project will not impact Caltrans or significantly impact County drainage facilities. With the implementation of this measure the potential for the project to result in flooding onsite or offsite would be **less-than-significant with mitigation incorporation**.

iii) The project will result in an increase in runoff due to the addition of impervious surfaces at the project site. The majority of the project site will be paved and the remaining areas graveled. The project includes a stormwater drainage system to capture stormwater runoff from the project site in a drainage swale located along the western boundary of the project site that will convey runoff to a vegetated infiltration basin. Runoff from the project site will be managed in accordance with the requirements contained in the Construction General Permit and Industrial General Permit. WDRs or an NPDES permit will be obtained for the project as required. Impacts related to runoff from the project site will be **less-than-significant.**

iv) The project site is not within a flood hazard zone. The majority of the project site is designated as Zone X (area of minimal flood hazard). The northern portion of the project site is located within Zone D (Area of Undetermined Flood Hazard). The project will not impede or redirect flood flows. **No impact**.

d) The project is not within a flood hazard, tsunami, or seiche zone. There is no risk of the project to become inundated and risk release of pollutants**. No impact.**

e) The Sustainable Groundwater Management Act (SGMA) applies to all California groundwater basins and requires that high- and medium-priority groundwater basins form Groundwater Prioritization Agencies and be managed in accordance with locally developed Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. Burney Creek Valley groundwater basin is a low priority basin based on the Sustainable Groundwater Management Act (SGMA) Basin Prioritization. A groundwater sustainability plan has not been prepared for the basin and the project will not conflict with or obstruct with implementation of a sustainable groundwater management plan. As discussed above, compliance with the applicable permits from the Central Valley Regional Water Quality Control Board will protect surface water quality. The project will not conflict with or obstruct implementation of a water quality control plan. **Less-than-significant impact.**

MM HYD-1: Provide final drainage plan.

Prior to approval of the first grading or building permit the applicant shall provide a final

drainage plan, including a final design for the proposed vegetative swale, final drainage report prepared in accordance with Caltrans standards, and maintenance plan for the vegetative swale, including for mosquito control. The final drainage report shall, based on the design criteria of the applicable agencies responsible for maintaining the conveyance(s), demonstrate that the proposed drainage facilities will not result increase the peak rate and/or volume of runoff to county and/or Caltrans drainage facilities in excess of the capacity of existing improvements. If the preliminary design of the proposed vegetative cannot achieve this standard, additional on-site Best Management Practices (BMPs) shall be implemented, including but not limited to constructing landscaped areas near buildings and directing rooftop run-off to these areas, placement of rain barrels to capture roof top run-off, and/or reducing impervious surface area where feasible. The final drainage plan shall be implemented prior to initiating the proposed use(s) and may be achieved incrementally based on the phasing of construction and initiation of the use(s).

XI. LAND USE AND PLANNING Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Setting

The project site is located northeast of the unincorporated community of Burney. The project site includes the former rail yard of the McCloud River Railroad and has been used as a storage yard for various projects in the past. More recently the project site has been used for loading wood chips and agricultural projects.

As shown on Figure 2, the current Shasta County General Plan land use designations for the property are Agricultural Cropland (A-C) and Industrial (I). According to the Shasta County General Plan, lands designated on the land use maps as A-C shall be principally used for grazing and/or crop production. Lands may also be used for residential purposes accessory to the principal uses well as low-intensity commercial and recreation uses or mineral exploration or extraction activities which will not interfere with the principal uses of lands for agricultural purposes.

According to the Shasta County General Plan, the Industrial land use provides for the intermixing of industrial uses with varying degrees of impacts, scales of operation, and service requirements (including rail access). Industrial land use should be located along a freeway, highway, or arterial roadways.

As shown on Figure 3, the project site is in the Unclassified (U) and Light Industrial combined with Design Review (M-L-DR) zone districts. Descriptions of each zone district are included below.

Unclassified (U) District
The Unclassified (U) zone district is intended to be applied as a holding district until a precise principal zone district has been adopted for the property. All new uses in this district shall be consistent with the applicable policies of the general plan. Site development standards for the unclassified district are included in Section 17.64.050 of the Shasta County Municipal Code.

Light Industrial (M-L) District
As described in the Shasta County Municipal Code, the purpose of the Light Industrial (M-L) District is to provide suitable areas for a variety of low-intensity manufacturing, processing, assembly, and distribution uses which utilize materials that generally are already in a processed form and which do not emit unacceptable or harmful levels of noise, dust, odors, smoke, bright light, or vibration or involve dangerous or explosive materials. This district also provides for a limited range of professional, business, and administrative offices, commercial uses, and other activities which are accessary to permitted industrial uses. This district is consistent with the Industrial (I) general land use designation. Site development standards for the Light Industrial District are included in Section 17.56.050 of the Shasta County Municipal Code.

Design Review (DR) District
The Design Review (DR) District is intended to be combined with any principal district for one or more of the following purposes:

- To protect areas having unique environmental, physical, historical, or scenic features;
- To promote design and architectural features that are consistent with adopted community design guidelines for the areas or general design review standards, as applicable;
- To encourage integrated approaches to the use of land and related physical development;
- To ensure compatibility with surrounding land uses; and
- To protect the public's health and safety

The regulations of this district prevail over any conflicting regulation of any principal district with which this district is combines. Site development standards for this district are included in Section 17.78.030 of the Shasta County Code.

Discussion

a) The project site includes undeveloped land northeast of the unincorporated community of Burney. The project will not physically divide an established community. **No impact**.

b) The majority of the project site is designated Industrial and zoned light industrial combined with design review (M-L-DR). As discussed above, the purpose of the light industrial district is to provide suitable areas for a variety of low-intensity manufacturing, processing, assembly, and distribution uses which utilize materials that generally are already in a processed form and which do not emit unacceptable or harmful levels of noise, dust, odors, smoke, bright light, vibration or involve dangerous or explosive materials. The remainder of the project site is zoned U. The project is not permitted outright in the U district; however, all other uses not otherwise prohibited by law and not inconsistent with any portion of the General Plan are permitted within the U district with a use permit.

As described in Shasta County Code Chapter 17.58, the purpose of the General Industrial (M) district is to provide areas for all types of industrial uses and uses that are accessory to industrial uses. This district is consistent with the Industrial (I) General Plan land use designation. Site development standards for the M district are included in section 17.58.050 of the Shasta County Code. The maximum structural height standard in the M district is forty-five feet, except when within forty feet of a residential district, it shall be one story not to exceed twenty feet, except as may be allowed with the approval of a use permit as provided in 17.84.030 of the Shasta County Code.

The current M-L-DR district was adopted in 1989 as part of a countywide rezoning that occurred after the county General Plan was updated in 1984. Industrially zoned lands in the "Black Ranch Road industrial area" were rezoned from industrial zoning to light industrial zoning. No specific rational for the down zoning was presented in the 1989 staff report but is presumed that it was proposed to create a transition from the mix of light-industrial, commercial, and residential zones applied to the eastern end of the Burney. The sawmill project is not permissible in the M-L district but is allowable in the proposed M district with approval of a use permit. The proposed sawmill is of greater intensity than some uses permissible in the M-L district but in some respects is similar to M-L uses such as machine shop, cabinet or woodworking shops, and contractor's yards which are permissible in the M-L district with approval of a use permit. Impacts that would typically be associated with uses that require a use permit in the M-L district and would also be associated with uses permissible in the M district, including to noise, dust, odors, smoke, bright light, and hazardous materials, are considered in this document and will be less-than-significant or less-than-significant with mitigation incorporation. The proposed M district is consistent with the Industrial General Plan land use designation for the property.

As described in the Shasta County Code Chapter 17.78, the design review (DR) district is intended to be combined with any principal district for one or more of the following purposes: To protect areas having unique environmental, physical, historical or scenic features; To promote design and architectural features that are consistent with adopted community design guidelines for the area or general design review standards, as applicable; To encourage integrated approaches to the use of land and related physical development; To ensure compatibility with surrounding land uses; and/or, To protect the public's health and safety.

The DR district was adopted with the change from M to M-L. No specific design standards were adopted for the DR and the 1989 staff report does not provide a specific rational for its application but in general at that time DR zoning was adopted for properties along transportation corridors and in proximity to urbanized areas. In some cases, it was indicated that the application of the DR in these areas was for aesthetic purposes. In cases where there are no adopted community design guidelines for an area, Shasta County Code Chapter 17.18 Design Review (DR) District projects are required to prepare and establish a design theme which takes into account the relationship of the project to the surrounding area, including, but not limited to, the proposed project's visual appeal and character, scale of development and sense of proportionality, building size and dimension, mix and pattern of color and architectural variation, lighting, signing and other physical relationships affecting appearance between various architectural styles found in and around the development and that landscaping, consistent with the design theme, is provided which meets or exceeds the minimum landscaping standards in Section 17.84.040 and provides shading over thirty percent, or more, of parking and pedestrian

areas within the project within ten years after completion of the project. For discretionary projects, this has been implemented through design guidelines and conditions that when executed demonstrate compliance with these standards. Development nearest the project site includes the Pacific Gas and Electric Company and Burney Disposal offices and maintenance yards and a Grocery Outlet supermarket. The PG&E and Burney Disposal properties are developed with a mix of building types typically associated with light-industrial/industrial use, including metal buildings and both facilities also store equipment and materials outdoors. The potential aesthetic impacts of the proposed development are discussed above.

Public utilities, including the use of land for public utility purposes by an entity providing pipeline, gas, electrical, telephone, telegraph, water or sewage service that is subject to the jurisdiction of the California Public Utilities Commission; the use of land for utility purposes, whether or not owned, controlled or operated by a public entity, whose services are performed for or commodities delivered to the public or any portion thereof; and private energy production, transmission relay, repeater, translator, radio and television towers and equipment and cable television facilities, such as the proposed bioenergy facility, are permissible in all zone districts. The proposed bioenergy facility would be developed primarily within the U zoned portion of the property with a portion of the fuel storage area for the bioenergy facility being proposed within the area of the property to be rezoned to the M zone district.

Public utility facilities often involve the development of a tall structures to house large equipment and typically include other tall structures such as cooling towers, stacks, etc. In accordance with Shasta County Code section 17.84.030.B.1 chimneys, smokestacks, or similar structures may be erected above the height limits specified in the code provided that no roof structure or space associated with these structures provides additional floor space. For all proposed non-residential over-height structures, approval of a use permit is required in accordance with Shasta County Code section 17-84.030.B.4. Over height structures have the potential negatively impact aesthetics, natural light and/or air on adjoining properties, and/or, if in the vicinity of an airport, public safety. The potential aesthetic impacts of the project are discussed in section I above and have been determined to be less that significant. There are no sensitive receptors or uses in the vicinity of the proposed over-height bioenergy facility building that would be impacted by shadows cast by the building. The project sire and adjoining parcels are not densely developed to the extent that the proposed over-height bioenergy facility building would diminish ventilation. The project site is not located near an airport.

The bioenergy facility would be developed on a portion of the property that is designated for agricultural use. As discussed in section III above, impacts to agricultural lands from the project would be less-than-significant.

A use permit will be obtained for the project. The project will not conflict with any applicable land use plan, policy, or regulation for purpose of avoiding or mitigating an environmental effect with implementation of mitigation measures described in this this document. This impact will be **less-than-significant**.

Mitigation Measures: None proposed.

XII. MINERAL RESOURCES
Would the project:

	Potentially Significant Impact	Less-than-significant with Mitigation Incorporation	Less-than-significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Setting

California's Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into mineral resource zones based on the known or inferred mineral resource potential of that land. The primary goal is to ensure that important mineral resources do not become inaccessible due to uniformed land-use decisions. To this end, the California Geological Survey performs objective mineral land classifications to assist in the protection and wise development of California's mineral resources (California Department of Conservation 2019).

A search of the SMARA Mineral Lands Classification Portal shows the project site within the study area *Mineral Land Classification of Alluvial Sand and Gravel, Crushed Stone, Volcanic Cinders, Limestone and Diatomite within Shasta County*. The project site is not located within a mineral resource zone within the study area.

Discussion

a) The State of California has not designated an area of statewide or regional mineral resource significance within the project site. The project will not result in the loss of availability of a mineral resource of value to the region or residents of the state or delineated locally important mineral resource. **No impact**.

b) The project will not result in the loss of a locally important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan. **No impact**.

Mitigation Measures: None proposed.

XIII. NOISE Would the project result in:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards	☐	☒	☐	☐

established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project 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?	☐	☐	☐	☒

Setting

The project site is located northeast of the unincorporated community of Burney and north of SR-299 on the eastern side of Black Ranch Road. Existing noise sources in the project area include traffic noise from SR-299 and Black Ranch Road. According to Table N-II of the Shasta County General Plan Noise Element, estimated 2020 traffic noise levels for SR-299 between Pine Street in Burney to the junction of SR-89 are 60 dB Ldn 299 feet from the center of the roadway and 65 dB Ldn 139 feet from the center of the roadway. An additional noise sources in the project vicinity includinges but not limited to industrial and commercial operations at such as the adjacent Burney Disposal Transfer Station and Recycling Center, Pacific Gas and Electric Service Center at the corner of State Highway 299E and Black Ranch Road, and a Grocery Outlet retail store approximately 500 feet southwest of said intersection, all of which are closer to sensitive receptors nearest the project site. The town of Burney, while small and located in rural eastern Shasta County, is urbanized and provides goods and services to residents of eastern Shasta County that are commensurate with its urban development pattern. Ambient background noise levels in metropolitan, urbanized areas typically vary from 60 to 70 dB and can be as high as 80 dB or greater; quiet suburban neighborhoods experience ambient noise levels of approximately 45 to 50 dB while rural areas are the quietest with sound levels of 35 to 40 dB (U.S. Environmental Protection Agency 1978). Due to the location of the project site near the highway and town it is likely that existing ambient noise levels in the vicinity of the project would be in the range of louder rural areas and quieter suburban areas.

The Shasta County General Plan Noise Element contains noise standards for transportation and non-transportation noise sources. As required by the Noise Element, noise likely to be created by a proposed non-transportation land use shall be mitigated so as not to exceed the noise level standards of Table N-IV of the Noise Element measured immediately within the property line of adjacent land uses designated as noise-sensitive or in rural areas where large lots exist, at a point 100 feet from the residence. Additionally, the County can impose noise level standards that are more restrictive based upon a determination of existing low ambient noise levels. The Shasta County noise standards for non-transportation sources are included in Table 8.

Table 8
(Table N-IV of Shasta County General Plan Noise Element)
NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION SOURCES

Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly Leq (dB)	55	50

The noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are more restrictive than those specified above based upon determination of existing low ambient noise levels.

In rural areas where large lots exist, the exterior noise level standard shall be applied at a point 100' away from the residence. Industrial, light industrial, commercial, and public service facilities which have the potential for producing objectionable noise levels at nearby noise-sensitive uses are dispersed throughout the County. Fixed-noise sources which are typically of concern include, but are not limited to, the following:

HVAC Systems, Cooling Towers/Evaporative Condensers, Pump Stations, Lift Stations, Emergency Generators, Boilers, Steam Valves, Steam Turbines, Generators, Fans, Air Compressors, Heavy Equipment, Conveyor Systems, Transformers, Pile Drivers, Grinders, Drill Rigs, Gas or Diesel Motors, Welders, Cutting Equipment, Outdoor Speakers, Blowers

The types of uses which may typically produce the noise sources described above include, but are not limited to:
industrial facilities including lumbermills, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, racetracks, landfills, sand and gravel operations, and athletic fields.

Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations, and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Other noise sources are presumed to be subject to local regulations, such as a noise control ordinance. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc.

Noise created by new transportation sources shall be mitigated to satisfy the levels specified in Table N-VI at outdoor activity areas and/or interior spaces of existing noise-sensitive land uses. Transportation noise shall be compared with existing and projected noise levels shown in Tables N-1 and N-II of the Noise Element. Shasta County noise standards for transportation sources are included in Table 9.

As described in the Noise Element, "noise sensitive land uses" include residential areas, parks, schools, churches, hospitals, and long-term care facilities. The closest noise-sensitive land uses to the project site include property designated as rural residential north of the adjacent wastewater treatment plant and residential properties southwest of the project site located on Cornaz Drive in Burney. Noise-sensitive land uses in the project vicinity are included on Figure 11. The property line of the rural residential parcel is approximately 950 feet north of the project site and the residence located on the parcel is 1,700 feet from the northern boundary of the project site. The property line of the closest residence on Cornaz Drive is approximately 750 feet from the southernmost boundary of the project site. Construction and operational activities at the project site will occur 1,600 feet from the property line of the closest residence on Cornaz Drive.

Table 9 (Table N-VI of the Shasta County General Plan Noise Element) MAXIMUM ALLOWABLE NOISE EXPOSURE TRANSPORTATION NOISE SOURCES			
Land Use	Outdoor Activity Areas[1] Ldn/CNEL, dB	Interior Spaces	
		Ldn/ CNEL, dB	Leq, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[4]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playground, Neighborhood Parks	70	--	--

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
[2] As determined for a typical worst-case hour during periods of use.
[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, exterior noise levels of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
[4] In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

Discussion

a) The project will result in an increase in ambient noise levels in the project vicinity during construction and operation of the project.

Construction

Construction of the bioenergy facility and sawmill is anticipated to occur over 18 months to two years. Construction of the bioenergy facility will require the use of semi-trucks, excavators, dump trucks, forklifts, cranes, cherry pickers, scissor lifts, and concrete trucks. Construction activities occurring in the remainder of the project site will include mainly grading and paving as well as assembly of pre-fabricated buildings. The noise level generated during construction will depend on the type and number of pieces equipment operating, which will vary during each phase of construction. Typical ranges of noise levels from construction sites for varying phases of construction are included in Table 10.

As shown in Table 10, typical hourly average noise levels during construction can range from 65 to 89 dB at a distance of 50 feet. Stationary point sources of noise, including construction equipment attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling of distance because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees.

Table 10
TYPICAL RANGES OF ENERGY EQUIVALENT NOISE LEVELS (LEQ IN DBA) AT CONSTRUCTION SITES

	Domestic Housing		Office Buildings, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreation, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Notes: I- All pertinent equipment present at site; II- Minimum required equipment present at site
Noise levels included in the table assume the equipment producing the highest noise levels is located 50 feet from an observer and all other equipment was considered as being 2,000 feet from the observer.
Source: USEPA 1973

Construction activities at the project site will occur more than 1,600 feet from the property line of the closest residential land use on Cornaz Drive in Burney and 1,700 feet from the closest residence north of the project site. Assuming an attenuation rate of 7.5 dB per doubling of distance from the source due to soft site conditions surrounding the project site, the maximum estimated noise level 1,600 feet from the project site boundary could be up to 51 dB Leq.

Noise generated during construction could exceed the Shasta County nighttime noise standard for non-transportation sources of 50 dB Leq at the nearest sensitive land uses. The nighttime noise standard would be exceeded if construction activities occur between the hours of 10:00 p.m. to 7:00 a.m., resulting in a significant impact. **MM NOI-1** includes limits on the hours of construction of the project to ensure construction noise levels do not exceed Shasta County nighttime noise standards. Construction noise generated by the project will be **less-than-significant with mitigation incorporation**.

Operational Noise

Operation of the project will result in permanent noise level increases in the project vicinity. Operational noise sources include bioenergy plant operations, wood product finishing/production, and traffic. Biomass plant equipment includes generators, turbines, hoppers and conveyors. All equipment will be enclosed within a building with exception of a draft fan on the boiler and cooling towers. Generators will be inside the building in soundproof chambers. The turbine will be inside a soundproof, attenuated, ventilated room within the building. Based on noise measurements of facilities using the same technology, noise within the plant building will be 65 to 85 dB (Leaf Trio 2021). The building will be composite aluminum/steel laminate standard cladding with insulation. The building will be constructed to provide the amount of attenuation required to comply with local noise standards. For reference, a biomass plant in the United Kingdom using the same technology was measured to generate 35 dBA at a distance of 100 meters (328 feet) (Leaf Trio 2021). Implementation of **MM NOI-2** will ensure noise from the bioenergy plant will not exceed local standards for non-transportation noise sources and/or significantly exceed existing ambient noise levels at the property line of the nearest noise-sensitive land use. Biomass plant noise will be **less-than-significant with mitigation incorporation**.

Additional activities at the project site including unloading and loading of lumber, unloading logs for firewood production, unloading logs/slash for feedstock production, grinding trees/slash for occasional feedstock production, and transport of firewood from the site will occur in the remaining areas of the project site. Equipment will include a grinder, forklift, heel boom log loaders, rubber-tire wheel loaders, water truck, firewood processor (Cord King), sawmill, and trucks. The sawmill will be located within a building. For feedstock handling for the plant, a CAT 950 wheel loader with a bucket will be used to push feedstock into the conveyer area and to move the feedstock pile to keep it oxygenated. Reference noise levels for similar equipment used at the project site are included in Table 11.

Table 11
TYPICAL OUTDOOR EQUIPMENT NOISE LEVELS

Equipment	Maximum Noise Level at 50 feet (dBA)	Approximate Distance to Closest Noise-Sensitive Land Use (feet)
Grinder[1]	81	2,800
Forklift [2]	88	1,800
Front-End Loader[4]	79	1,800
Water truck[2]	72	1,800
Firewood Processor[3]	85	1,600
Saw[4]	76	1,900
Truck[4]	84	1,800

[1]Reference sound level is for the Morbark 1100 Tub Grinder provided by Oxygen Environmental Ltd., Article12 Compliance Information, 22 Dec 2004
[2] The reference sound level for water truck is from Peninsula Heights Noise and Vibration Assessment
3Reference sound level is from Sound Level Survey conducted at a firewood processing facility by Grady Consulting, LLC.
4 Reference noise level from FHWA Roadway Construction Noise Model User Guide

Wood product operations are proposed to occur between 6:00 a.m. and 4:00 p.m. Transport of feedstock to the site will occur Monday through Friday from 6:00 a.m. to 6:00 p.m. Noise levels generated by operations will vary depending on the number of pieces of equipment operating at one time. The noise level from equipment operation at the closest residence to the operation was estimated using the FHWA Roadway Construction Noise Model Version 1.1. Assuming the simultaneous operation of each piece of equipment in Table 11, at the closest point to which it could be operated to the nearest sensitive receptor (residence on Cornaz Drive), the estimated noise level would be 54 dB Leq and 54 dB Lmax at the closest residence located on Cornaz Drive. This estimate assumes 3 dB of shielding provided by trees and the buildings at the PG& E facility between the project site and this residence. Generally, an at-grate building row with a building to gap ratio of 40 percent to 60 percent provides noise reduction of approximately 3 dB (FHWA 2017B).

Operation of the wheel loader (79 dB at a distance of 50 feet) to push feedstock into the conveyer area of the bioenergy facility and to move the feedstock pile will not exceed the Shasta County nighttime noise standard of 50 dB Leq at nearby receptors since it will be operated in the center portion of the project site more than 2,500 feet from the closest residence. Noise levels from operation of the wheel loader are estimated to be 45 dB at a distance of 2,500 feet based on the standard noise attenuation rate of 6 dB per doubling of distance from the source. Wood product operations are not anticipated to exceed the Shasta County daytime noise standard of 55 dB Leq at the closest noise-sensitive land uses to the project site. However, noise levels generated by wood production activities and unloading of feedstock could exceed the Shasta County nighttime noise standard of 50 dB Leq at the nearest noise-sensitive land use.

Noise generated by wood product operations and unloading of feedstock occurring between the hours of 10:00 p.m. to 7:00 a.m. are potentially significant. **MM NOI-3** is included to place limits on the equipment operated for wood product activities and unloading of feedstock prior to 7:00 a.m. each morning. Noise generated by wood product operations and unloading of feedstock at the project site will be **less-than-significant with mitigation incorporation**.

Traffic

Truck and employee vehicles accessing the facility will result in traffic noise level increases along SR-299 and Black Ranch Road. The 2019 Annual Average Daily Traffic (AADT) on SR-299 at Black Ranch Road was 8,400 (west of Black Ranch Road) and 5,200 (east of Black Ranch Road). Doubling the number of sources (i.e. vehicles) increases the hourly equivalent sound level (L_{eq}) by approximately 3 dB, which is usually the smallest change that people can detect without specifically listening for the change (FHWA 2018). The project is estimated to generate between 10 to 126 daily round-trips (20 to 252 total trips) depending on operations at the site. Average and maximum daily traffic generated by the project will not result in a substantial increase in vehicle and truck traffic on SR-299 compared to existing traffic volumes and will not result in a noticeable traffic increase along SR-299.

The majority of traffic generated by the project (99 percent) will access the project site from the south. Feedstock trucks will not use Black Ranch Road north of the project site to access the project site, unless a logging project providing feedstock is located on Black Ranch Road north of the project site. The project could result in noticeable traffic noise increases on the segment of Black Ranch Road south of the project site during periods when up to 50 truckloads per day of feedstock enter and exit the site and when maximum public drop-off traffic occurs. There are no noise-sensitive land uses adjacent to Black Ranch Road between SR-299 and the project site. The land use designation of the properties south of the project site adjacent to Black Ranch Road is Industrial (I). Agricultural Cropland (A-C) is located adjacent to Black Ranch Road immediately west of the project site. No residences, parks, schools, churches, hospitals, or long-term facilities are located on these properties.

The residences on Cornaz Drive closest to Black Ranch Road are located more than 700 feet west of Black Ranch Road. These residences are closer to SR-299 than Black Ranch Road. Noise from traffic on Black Ranch Road will not be discernible over traffic noise from SR-299 at these residences. Traffic noise on Black Ranch Road will not exceed the maximum allowable noise exposure for transportation noise sources for the land uses included in Table 9. Noise from traffic generated by the project will be **less-than-significant**.

b) The project will require operation of equipment during construction that will produce short term increases in vibration in the immediate project vicinity. Additionally, operation of the bioenergy facility as well as equipment used for wood production activities will produce vibration.

Construction

Equipment used for construction of the project will result in varying degrees of ground vibration, depending on the specific equipment involved. Groundborne vibration levels associated with various types of construction equipment are included in Table 12. Construction vibration is assessed in terms of peak particle velocity (PPV) and ground-borne vibration related to human annoyance is related to rms velocity levels expressed in VdB.

Table 12 REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT			
Equipment		**Peak Particle Velocity at 25 Feet (in/sec)**	**Approximate Lv* at 25 feet**
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Vibratory Roller		0.210	94
Large Bulldozer		0.089	87
Loaded Trucks		0.076	86
Small Bulldozer		0.003	58
Notes: RMS velocity in decibels, VdB re 1 micro-in/sec Source: Transit Noise and Vibration Impact Assessment Manual			

Construction vibration damage criteria for buildings ranges from 0.5 PPV in/sec for reinforced-concrete steel or timber buildings to 0.12 PPV (in/sec) for buildings extremely susceptible to vibration damage (FTA 2018). The following equation can be used to apply the propagation adjustment to the source reference level to account for the distance from the equipment to the receiver:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

The closest structures on properties adjacent to the project site include the Burney Disposal Transfer Station buildings located more than 150 feet from the project site boundary. Piling may be required for construction of the bioenergy facility and will occur more than 250 feet from these buildings. Using the equation above, the estimated Peak Particle Velocity (0PPV) from pile driving would be 0.04 in/sec at the closest structure, which is below the damage criteria threshold for any building. Other equipment used during construction activities would produce much lower levels of vibration and would not exceed 0.1 PPV in/sec at these buildings.

The vibration threshold of perception in humans is approximately 65 VdB and a vibration level of 85 VdB in a residence can result in strong annoyance (FTA 2018) The closest residence to the project site is located more than 1,600 feet from where construction equipment would be used and, due to this distance, vibration from construction equipment would not be perceptible at these residences. Vibration levels generated by construction of the project will be **less-than-significant**.

Operation

The turbine within the biomass building is the only source of vibration within the bioenergy facility. The turbine will be located on an anti-vibration mounted pad that will eliminate vibration. Vibration from the bioenergy facility will not be perceptible off the project site. Other equipment used at the project site during operation do not generate significant levels of vibration. Vibration from the project site will not exceed 0.1 PPV at the nearest offsite structure or 65 VdB at the nearest residence. Vibration impacts of project operation will be **less-than-significant**.

c) The nearest airport is the Fall River Mills Airport which is located approximately 14 miles northeast of the project site. The project is not within an airport land use plan, or within two miles of a public airport, or within the vicinity of a private airstrip. The project will not expose people residing or working in the project area to excessive noise levels from aircraft. **No impact**.

Noise Mitigation Measures

The following mitigation measures are included to ensure the project complies with noise standards contained in the Shasta County General Plan Noise Element:

NOI-1: Limit Construction Hours
Construction will occur between 7:00 a.m. and 10:00 p.m. Exceptions are allowed if it can be shown that construction beyond these times is necessary to alleviate traffic congestion and safety hazards. On occasions, when activities related to construction at the project site must occur between 10:00 p.m. and 7:00 a.m., neighbors will be notified in advance.

NOI-2: Attenuation of Biomass Plant Noise Levels
An acoustical analysis will be conducted prior to issuance of the first building permit for construction of the bioenergy facility to establish existing ambient baseline noise levels in the vicinity of the project site. The bioenergy plant building will be constructed to provide the attenuation required to meet the Shasta County noise standards for non-transportation noise sources (55 dB Leq between 7:00 a.m. and 10:00 p.m. and 50 dB Leq between 10:00 p.m. and 7:00 a.m.) at the property line of the closest noise-sensitive land use to the bioenergy facility estimated to be 950 feet due north of the project site boundary.

The County can impose noise level standards which are more restrictive than those specified above based upon determination of low ambient noise levels. The Federal Interagency Committee on Noise (FICON) developed noise guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level at the closest sensitive receptors to the project site. Based upon FICON recommended noise evaluation for ambient noise levels less than 60 dB, an increase of 5 dB or greater would be considered significant at the closest sensitive receptor. Noise measurements will be conducted at the property line of the closest noise-sensitive land use following construction of the bioenergy facility to ensure noise levels generated by the plant do not exceed Shasta County Noise standards or an increase of greater than 5 dB over existing ambient noise levels (if existing ambient noise levels are less than 50 dB) at the nearest noise-sensitive land use.

Measures to control noise from the facility could include locating all plant and/or processing activities indoors where possible, acoustically treating and sealing the building to prevent noise breakout, keeping doors closed except for entry and exit of vehicles, fitting all internal noise-generating equipment with acoustical enclosures, acoustically treating external air-cooled condenser fans, and minimizing tonal exhaust from the stack through fitting of a silencer within the stack.

NOI-3: Limit Hours of Unloading Feedstock and Wood Product Operations
Loading and unloading of feedstock, timber, lumber, or logs/slash and operation of equipment associated with wood production activities will be limited to 7:00 a.m. to 10:00 p.m.

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

Setting

This project site is located northwest of the unincorporated community of Burney on Black Ranch Road. Surrounding properties include a wastewater treatment plant, PG&E, and an old lumber mill. Burney Disposal is nearby.

Discussion

a) The project will provide up to 20 jobs in the community some of which will be temporary construction jobs with up to 12 permanent jobs provided during operations. The workforce is expected to come from the Burney area. The project will not induce unplanned population growth in the area or include the expansion of major roads or infrastructure. The project will not generate commercial activities that would induce substantial growth in the project area. Impacts related to substantial unplanned population growth will be **less-than-significant**.

b) The project site is undeveloped land not designated or zoned for residential use and does not contain housing. The project will not displace house or require the construction of replacement housing elsewhere. **No impact.**

Mitigation Measures: None proposed.

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:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Setting

The project site is in the unincorporated area of Shasta County. The site is located in a State Responsibility Area in which fire protection services are provided by the California Department of Forestry and Fire Protection (CAL FIRE). The project site is also within the boundaries of the Burney Fire Protection District. Within unincorporated areas of Shasta County, where applicable local agencies (such as the Burney Fire Protection District) are responsible primarily for non-wild land fires while CAL FIRE responds primarily to wildland fires. In areas where no local agencies have jurisdiction, CAL FIRE responds to both non-wildland and wildland fires. The unincorporated areas of Shasta County receive general public safety and law enforcement services from the Shasta County Sheriff's Office. A Sheriff's station is located in Burney. The project site is within the Fall River Joint Unified School District. There are several parks within the community of Burney including Washburn-Bue Park, Lions Civic Park, Bailey Park, and Bailey Little League Field.

Discussion

a) The project will not result in population changes that would require new or physically altered schools, parks, or other public facilities. The project will not result in an impact to service ratios, response time or other performance objectives for fire or police protection which would require the construction of new or physically altered governmental facilities. The project will have **no impact** to public services.

Mitigation Measures: None proposed.

XVI. RECREATION Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting

Burney is a popular destination for outdoor recreation. It is located between Mt. Lassen and Mt. Shasta and has winter recreation including snowshoeing, sledding, snowmobile riding, cross-country skiing and hundreds of miles of roads and trails. Some main attractions in the area are Burney Falls State Park, Lassen National Park, Lassen National Forest, The Pacific Crest Trail, mountain biking, road cycling, and The Great Shasta Rail Trail. Many outdoor activities are available at these main attractions such as camping, hiking, boating, fishing, backpacking, ATV adventures, equestrian trails, and wilderness areas as well as many lakes and boating opportunities.

Discussion

a) The project will not result in a population increase that would increase the rate of existing neighborhood or regional parks or other recreational facilities that substantial deterioration of the facility would occur or be accelerated. **No impact.**

b) The project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. See a). **No impact**.

Mitigation Measures: None proposed.

XVII. TRANSPORTATION Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA guidelines 15064.3, subdivision?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Setting

The project site will be accessed via SR-299 and Black Ranch Road. According to the California Department of Transportation (Caltrans) Traffic Census Program, Annual Average Daily Traffic (AADT) on SR-299 at Black Ranch Road PM 76.181 was 8,400 AADT west of the intersection and 5,200 AADT east of the intersection.

Regulatory Setting

State

Caltrans has jurisdiction over state highways. Caltrans requires a traffic impact study when a project:

1. Generates over 100 peak hour trips assigned to a state highway facility
2. Generates 50 to 100 peak hour trips assigned to a state highway facility – and, affected state highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS "C" or "D").
3. Generates 1 to 49 peak hour trips assigned to a state highway facility – the following are examples that may require a full TIS or some lesser analysis:
    a. Affected state highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS "E" or "F").
    b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
    c. Change in local circulation networks that impact a state highway facility (i.e. direct access to a state highway facility, a non-standard highway geometric design, etc.).

County

Shasta County General Plan Transportation policies that could potentially apply to the proposed project included in the Circulation Element of the Shasta County General Plan are as follow:

C-6d New commercial and industrial development accessing arterial and collectors shall provide access controls for public safety by means such as limiting the location and number of driveway access points and controlling ingress and egress turning movements.

C-6e Discretionary uses located in areas designated Mixed Use (MU), Commercial (C), or Industrial (I) shall be served by a paved road. The County shall obtain street right-of-way dedications with the approval of subdivisions, use permits, and other discretionary actions. All other non-residential discretionary uses not located in a General Plan area described above, excepting resource designations, shall ultimately be served by a paved road, unless deferred or waived, based on traffic generation factors.

C-6j New development shall provide circulation improvements for emergency access by police, fire, and medical vehicles; and shall provide for escape by residents/occupants in accordance with the Fire Safety Standards.

C-6l New development which may result in exceeding LOS E on existing facilities shall demonstrate that all feasible methods of reducing travel demand have been attempted to reach LOS C. New development shall not be approved unless traffic impacts are adequately mitigated. Such mitigation may take the form of, but not limited to, the following:

- provision of capacity improvements to the specific road link to be impacted, the transit system, or any reasonable combination;
- provision of demand reduction measures included as part of the project design or project operation or any feasible combination

C-8b Working in conjunction with Caltrans, the County shall designate and provide signed truck routes, ensure that adequate pavement depth, lane widths, loading areas, bridge capacities, vertical height of overpasses and utility lines, and turn radii are maintained on the designated truck routes, and prohibit commercial truck traffic from non-truck routes except for deliveries

C-8c Adequate truck access to off-street loading areas in commercial and industrial areas shall be provided in all new development applications.

Discussion

Traffic related to the bioenergy facility will consist of feedstock delivery trucks, employees, and public drop-off of materials. The facility will require 55,000 bone dry tons of woody biomass per year. Assuming each truck will transport approximately 20 tons of feedstock, an estimated 2,640 truckloads of feedstock per year are anticipated to be required for the facility. With feedstock receipt occurring five days per week, an average of 10 feedstock trucks will be delivered each day. An additional truck could be required each day to transport ash from the site, leave for repairs, transport supplies or fuel, or transport ash from the site. A maximum of 50 trucks per day will deliver feedstock to the facility in circumstances of forest fire recovery or log market volatility. An average of 10 employees will enter and exit the bioenergy facility each day.

Additional traffic will be generated by wood product operations. The operation will include six to three employees entering and exiting the project site each operating day. Up to 15 trucks per day (Monday through Friday) will deliver logs to the project site for the sawmill operation. Each log

truck is anticipated to carry 40 tons of logs. An average of four pickup-truck loads of firewood from the site will be delivered to customers each day. Up to 40 pickup-truck loads are anticipated to be received on Mondays, Wednesdays, and Saturdays during public drop-off of fuel reduction material.

Daily trips generated by the project would range from 10 round trips per day (when only the bioenergy facility is operating on the weekends) to 86 round trips per day when the bioenergy facility, wood product operations, public drop-off, and firwood delivery activities are occurring on the same day. An estimated maximum of 126 round trips could occur in a day during periods of forest fire recovery or log market volatility.

a) The project will result in traffic increases on SR-299 and Black Ranch Road during construction and operation. The majority of traffic to and from the facility will use Black Ranch Road south of the project site to connect to SR-299. Feedstock trucks will use Black Ranch Road only if there is a feedstock-supplying project located north of the project site on Black Ranch Road or roads that intersect Black Ranch Road south of the intersection of Black Ranch Road and Clark Creek Road.

Operational traffic will consist of feedstock delivery trucks for both the sawmill and bioenergy facility, employees, and public drop-off of materials. Trucks delivering logs and feedstock and public drop-off of fuel reduction materials will be spread throughout the day and will not result in a significant increase in morning or evening peak hour traffic volumes. Employees trips will occur during peak morning and evening peak traffic hours. Up to 12 employees will be required for bioenergy facility operations and an additional 3 employees will be required for wood product operations. Employee trips occurring during peak traffic hours would not result in significant traffic increases. Traffic generated by operation of the project will not generate traffic numbers that would significantly reduce the volume to capacity ratio of SR-299 or Black Ranch Road to a reduced level of service.

Construction of the project will result in temporary increases in traffic consisting of construction workers and transport of construction equipment and materials to the project site. 24 to 48 employees will enter and exit the site each day during morning and evening peak traffic hours. Construction will take up to two years to complete. Equipment and material will be delivered throughout the day. Traffic generated by construction activities is not anticipated to significantly reduce the volume to capacity ratio of SR-299 or Black Ranch Road to a reduced level of service.

The project will not conflict with a program, plan, ordinance, or policy addressing the circulation system. This impact will be **less-than-significant**.

b) Section 15064.3 was recently added to the State CEQA Guidelines and states that "vehicle miles traveled" (VMT) is the preferred method for evaluating transportation impacts. The project will result in a short-term increase in VMT during construction of the project and a permanent increase in VMT during operations. Estimated VMT for operation of the project is included in Table 13.

Table 13 ESTIMATED OPERATIONAL VEHICLE MILES TRAVELED		
Vehicle/Source	**Peak Daly VMT**	**Average Daily VMT**
Bioenergy Chip Vans	5000	1600
Bioenergy Ash Truck	200	200
WPO Log Truck	3000	3000
WPO Firewood	2000	2000
WPO Public Pickup	171	171
Bioenergy Employees	288	288
WPO Employees	72	72
WPO= Wood product operations		

Shasta County has not yet completed consideration of transportation significance thresholds based on VMT and has not yet adopted or put into practice VMT-based transportation significance thresholds. Where no VMT threshold has yet been adopted, the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR, 2018) provides guidance. In areas not near established or incorporated cities or towns, for example, the Technical Advisory notes that "significance thresholds may be best determined on a case-by-case basis.

For other projects in the County, the County has decided to rely on an established environmental standard that is protective of resources of legislative concern in mandating that lead agencies evaluate VMT, i.e., a GHG emissions threshold. The intent of SB 743 is to encourage land use and transportation planning decisions and investments to reduce VMT and thereby contribute to the reduction of GHG emissions, as required by Assembly Bill 32. Therefore, for purposes of this Project, the Project's impact to VMT would be significant if it would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The analysis included in Section VIII (Greenhouse Gas Emissions) concludes that the project would result in a less-than-significant impact related to a potential conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions and may have a potential positive environmental benefit; therefore, the VMT generated by the project will result in a **less-than-significant impact**.

c) The project will not include a change in road design or construction that will increase hazards. There is a turn lane from SR-299 east onto Black Ranch Road that provides safe ingress and egress of commercial and non-commercial truck/vehicle traffic. The proposed use is compatible with existing uses in the project vicinity. **No impact**.

d) The project will be accessed by several driveways off of Black Ranch Road. The project will require review by the Burney Fire Protection District to ensure there is adequate emergency access. **No impact**.

Mitigation Measures: None proposed.

XVIII. TRIBAL CULTURAL RESOURCES Would the project:				
	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 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is:	☐	☐	☒	☐
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k) or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Setting

AB 52 was enacted on July 1, 2015, and establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource when feasible (PRC Section 21084.3).

Public Resources Code Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California cities, counties, and tribes regarding tribal cultural resources. Under AB 52, lead agencies are required to "begin consultation

with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

ALTA Archaeologist Samantha Beck contacted NAHC on March 23, 2021, to request a review of the Sacred Land file and to request a list of Native American contacts in the area. In the NAHC response dated April 9, 2021, Nancy Gonzales-Lopez (Cultural Resources Analyst) indicated that a search of the Sacred Lands File returned a negative result. The NAHC provided a list of four Native American tribes or individuals with cultural affiliations to the area. ALTA archaeologist Jamie Frattarelli sent letters to representative of these four tribes on June 22, 2022.

In accordance with Public Resources Code (PRC) Section 21080.3.1, the Pit River Tribe (Tribe) filed and Shasta County received a request for formal notification of proposed projects within an area of Shasta County that is traditionally and culturally affiliated with the Tribe. Pursuant to PRC §21080.3.1, the Department of Resource Management sent a certified letter to notify the Tribe that the project was under review and to provide the Tribe 30 days from the receipt of the letter to request consultation on the project in writing. The Tribe received a certified letter of notification on September 13, 2022, with the 30-day notification period ending on October 14, 2022. To date, no response has been received.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Discussion

a) i-ii. The project site does not contain any known cultural resources eligible for listing in the CRHR. The project could result in a substantial adverse change in the significance of currently undiscovered tribal cultural resources if encountered over the course of the project. Implementation of the condition of approval described in the Cultural Resources section of this document will ensure impacts to tribal cultural resources will be **less-than-significant.**

Mitigation Measures: None proposed.

XIX. UTILITIES AND SERVICE SYSTEMS Would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Require or result in the construction of new water or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, 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?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Setting

The project site is within the service areas of the following utility and service providers:

Electricity:	Pacific Gas and Electric Company (PG&E)
Wastewater:	Burney Water District
Solid Waste:	Burney Transfer Station
Water:	Burney Water District

Discussion

a) The project includes construction of a new bioenergy facility that will provide power to operations at the project site, PG&E, and nearby businesses. Electricity generated by the bioenergy facility will be used to power operations at the project site as feasible. Utility connections to PG&E power lines, water, and wastewater will be required at the project site. The project also includes construction of stormwater drainage features including a vegetated swale along the western boundary of the project site and vegetated infiltration basin in the northwest corner of the project site. These features are shown on Figure 5. Onsite modifications are considered in the analyses included in this initial study. The project will not require construction of new or expanded water or wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities offsite**. Less-than-significant impact**.

b) The project will require water for operation of the bioenergy facility, dry kilns, sawmill operations, log water, and for dust suppression onsite. Water will be provided to the project site by the Burney Water District. The District is responsible for review of water supplies prior to approving the water supply for the project. The District has indicated it will provide domestic water service to the project and that it has capacity to provide process water for the cogeneration plant and sawmill. . Impacts related to water supplies will be **less-than-significant**.

c) The applicant plans to dispose of wastewater to the Burney Water District Wastewater Treatment Plant. The project has been reviewed by the District with respect to its capacity to accept domestic and process wastewater. The District has indicated it will provide domestic waste water service and that based on the fact that it has previously accepted waste water from the Burney Mountain Power Cogeneration Facility (a larger facility that is no longer in operation) it likely has capacity to serve the proposed facility. It is likely that the constituents of process wastewater from the proposed facility would be similar and could be disposed in the same District water treatment pond that accepted wastewater from the Burney Mountain Power Cogeneration. Prior to the District's acceptance of wastewater from the project, the applicant would have to submit a complete characterization of the industrial discharge, an updated water balance, and treatability analysis for approval by the State of California Regional Water Quality Control Board (RWQCB) before the District accepts process wastewater from the project to the same pond to which the Burney Mountain Power Cogeneration Facility to ensure that process water from project is discharged in accordance with applicable standards and requirements. . **Less-than-significant impact.**

d) Commercial solid waste from the project will be picked up by a waste removal service such as Burney Disposal or removed from the operator and transported to the adjacent Burney Disposal Transfer Station. Solid waste generated by the project will also include biochar and ash generated by the bioenergy facility. The ash will be collected directly from the de-asher into trucks. This will be transported from the site and could be used as road building material or used as a soil amendment. If the ash cannot be used for these or similar uses it would be disposed of in accordance with all applicable laws governing the disposal of solid waste. Air pollution control residue will be treated, collected, and transported to a landfill by the operator. Bottom ash is less than 1 percent of the input volume of feedstock and air pollution control residue is less than 2 percent of the input volume. A maximum of one truck per day of ash/biochar is anticipated. Large quantities of solid waste will not be generated by the project. Solid wastes generated by the project will not exceed state or local standards, exceed local infrastructure, or impair the attainment of solid waste reduction goals. **Less-than-significant impact**.

e) The project will comply with all federal state and local statues and regulations relating to solid waste and disposal. **No impact.**

Mitigation Measures: None proposed.

XX. WILDFIRE If located on or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	☐	☐	☒	☐
c) Require installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Setting

A Fire Hazard Severity Zone (FHSZ) is a mapped area that designates zones (based on factors such as fuel, slope, and fire weather) with varying degrees of fire hazard (i.e., moderate, high, and very high). FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30- to 50-year period. The project is located within a State Responsibility Area, an area where the state has financial responsibility for wild land fire protection. Based on the Shasta County Fire Hazard Severity Zones in the State Responsibility Area map adopted by CAL FIRE on November 7, 2007, the project site is located in a Fire Hazard Severity Zone classified as ~~moderate~~ high.

Discussion

a) The project will not block traffic. The project will result in an increase in traffic on SR-299 and Black Ranch Road but would not result in traffic volumes that would interfere with evacuation. The project will not result in any changes that will impair an emergency response plan or emergency evacuation plan. **No impact**.

b) Construction activities could increase the risk of fire at the site from any work involving heat or sparks such as welding or sawing as or from the storage of flammable materials such as gases or fuel at the project site. The project could increase risk of fire at the site due to operation of the

bioenergy facility, operation of equipment and the storage of feedstock and wood products at the project site, and production of wood products. The project includes measures to decrease fire risk at the project site including a zoned sprinkler system and temperature detection system within the bioenergy facility, and fire protection and fuel management specifications that prevent inadvertent combustion and protect vegetation and facilities nearby in the event inadvertent combustion occurs. Management specifications include, but are not limited to, setbacks from native vegetation, buildings and fire suppression water supplies, maximum pile turnover times, inspection of incoming biomass loads, restrictions and standards for access to the piles and equipment operations in the vicinity of the piles, and monitoring of the piles. These management specifications will be incorporated as enforceable conditions of the requested use permit. Feedstock will be managed in accordance with the requirements of California Fire Code including limits on the size and heights of feedstock piles. California Fire Code contains additional requirements for mills, lumber storage, and wood chip storage. A 40,000-gallon water truck will be maintained onsite for dust and fire suppression. Fire protection water including fire hydrants would be provided in accordance with applicable fire safety standards and regulations. These measures will ensure impacts related wildfire risk at the project site will be **less-than-significant**.

c) The project will not include installation or maintenance of roads, fuel breaks, emergency water sources, or power lines that would exacerbate fire risk or result in impacts to the environment. **No impact.**

d) The project will not add a new risk for downslope or downstream flooding or landslide. Workers will not be exposed to downslope or downstream flood or landslides as a result of runoff, post-fire slope instability, or drainage changes. **No impact.**

Mitigation Measures: None proposed.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
	Potentially Significant Impact	**Less-than-significant with Mitigation Incorporation**	**Less-than-significant Impact**	**No Impact**
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?	☐	☒	☐	☐
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)				
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) Impacts associated with the project have been fully identified in this document. As discussed in sections above, the project has the potential to result in impacts to air quality, biological resources, cultural resources, noise, and tribal cultural resources. With the implementation of mitigation measures identified in this Initial Study, potential impacts to the quality of the environment, fish and wildlife species, and cultural/tribal cultural resources will be **less-than-significant with mitigation incorporation.**

b) Impacts of the project that are cumulatively considerable in combination with other projects include impacts related to biological resources, noise, traffic, energy, air quality, and greenhouse gas emissions. An additional sawmill facility is currently proposed approximately 7 miles northeast of the project. This project is located on a developed industrial site and will have minimal impacts to biological resources. Due to the distance between the projects, noise impacts of the projects will not combine and are not cumulatively considerable. Air quality, traffic, and greenhouse gas emissions generated by the project are cumulatively considerable in combination with the impacts from this sawmill. The project will have a less-than significant impact to GHG emissions and traffic. The air quality impacts of the project will be less-than-significant with mitigation incorporation. Therefore, cumulative impacts of the project will be **less-than-significant with mitigation incorporation.**

c) All environmental impacts including those that could affect human beings (Noise, Air Quality, Transportation, etc.) will be **less-than-significant**, **less-than-significant with mitigation incorporation,** or **no impact**. No additional mitigations measures beyond those included in this Initial Study will be required for impacts to human beings.

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INITIAL STUDY COMMENTS

PROJECT NUMBER ZA22-0008 & UP22-0002 – BAR OVER HEART, LLC.

GENERAL COMMENTS:

Special Studies: The following project-specific studies have been completed for the proposal and will be considered as part of the record of decision for the Mitigated Negative Declaration. These studies are available for review through the Shasta County Planning Division and online at https://www.shastacounty.gov/planning/page/ceqa-documents-and-notices-non-eir-documents.

1. Archeology Survey Report, ALTA Archeological Consulting, April 23, 2021, and Addendum
2. Air Quality Technical Report for Burney Bioenergy, RCH Group, August 2, 2022
~~3. Biological Survey and Report, VESTRA Resources, Inc., April 2021~~
~~4~~3. Preliminary Drainage Plan, VESTRA Resources, Inc., August 1, 2022
4. Botanical Survey Technical Memo, VESTRA Resources, Inc., August 31, 2023
5. Burney Bioenergy/Wood Products MND Air Quality Response to Comments, RCH Group, August 22, 2023

Agency Referrals: Prior to an environmental recommendation, referrals for this project were sent to agencies thought to have responsible agency or reviewing agency authority. The responses to those referrals (attached), where appropriate, have been incorporated into this document and will be considered as part of the record of decision for the Negative Declaration. Copies of all referral comments may be reviewed through the Shasta County Planning Division. To date, referral comments have been received from the following State agencies or any other agencies which have identified CEQA concerns:

1. California Department of Fish and Wildlife
2. California Department of Transportation (Caltrans)
3. California Regional Water Quality Control Board

Conclusion/Summary: Based on a review by the Planning Division and other agency staff, early consultation review comments from other agencies, information provided by the applicant, and existing information available to the Planning Division, the project, as revised and mitigated, is not anticipated to result in any significant environmental impacts.

From:	Iacona, Erika@Wildlife
To:	Lio Salazar
Cc:	Hawk, Debra@Wildlife
Subject:	Early Consultation Comments for Zone Amendment 22-0008 & Use Permit 22-0002 (Bar Over Heart Enterprises, LLC)
Date:	Monday, October 10, 2022 3:17:17 PM

Dear Lio Salazar,

The California Department of Fish and Wildlife (Department) has reviewed the consultation request for Zone Amendment 22-0008 & Use Permit 22-0002 (Bar Over Heart Enterprises, LLC). As a trustee for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and their habitat. As a responsible agency, the Department administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code (FGC) that conserve the State's fish and wildlife public trust resources. The Department recognizes that Shasta County and the project applicant have taken the appropriate steps to identify and assess biological resources and state special status species that have potential to occur within or in-proximity to the Project area and appreciates the opportunity to engage in early consultation. The Department offers the following comments and recommendations for this Project in our role as a responsible agency pursuant to the California Environmental Quality Act (CEQA), California Public Resources Code section 21000 et seq. The following are informal comments intended to assist the Lead Agency in making informed decisions early in the Project development and review process.

Mitigation Measures

The Department concurs with MM BIO-3 pertaining to the protection of bats, MM BIO-4 pertaining to stopping work when encountering special status wildlife and MM BIO-5 pertaining to nighttime traffic collision education. These mitigation measures appear to adequately protect potentially occurring wildlife. The following comments pertain to MM BIO-1 and MM BIO-2.

Nesting Birds (MM BIO-1)

The Department concurs with the use of MM BIO-1 however, the measure should be re-stated to read:

To avoid impacts to nesting birds and/or raptors protected under FGC sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act, one of the following shall be implemented:

a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31, when birds are not nesting; or

b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the Project area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall consider acoustic impacts and line-of sight disturbances occurring as a result of the Project to determine a sufficient survey radius to maximize observations of nesting birds. A nesting bird survey report should be prepared and at a minimum, the report should include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

If an active nest is located during the preconstruction surveys, a non-disturbance buffer shall be established around the nest by a qualified biologist in consultation with the Department and U.S. Fish and Wildlife Service to comply with FGC sections 3503 and 3503.5 and the Migratory Bird Treaty Act. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

The nesting bird survey report shall be submitted to the Department upon completion via email to R1CEQARedding@wildlife.ca.gov. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction nesting bird survey, the site shall be resurveyed.

Botanical Surveys (MM BIO-2)

"Focused surveys" that are limited to habitats known to support special status plants or that are restricted to lists of likely potential special status plants are not considered floristic in nature and are not adequate to identify all plants in a project area to the level necessary to determine if they are special status plants. The list of plants queried in the draft IS MND Biological Resources section should not be considered comprehensive, as additional special status plant and animal species may occur within the Project vicinity. The CNDDB is a positive sighting database. It does not predict where something may be found. Therefore, despite only two botanical species identified to have potential suitable habitat in the project area, other special status botanical species may be present on site.

The department strongly encourages MM BIO-2 to include a thorough assessment of rare plants and rare natural communities to be conducted prior to development or modification of the parcel. Conducting surveys ahead of Project approval is critical in that it allows the Department, land use planning agencies, and project proponents to make educated land use decisions. It also allows for the project proponents ample time to redesign their project to avoid and/or minimize significant impacts, if necessary. Botanical surveys should follow the Department's March 20, 2018, *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities,* available here: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959. As stated in the Protocols, these surveys must be conducted by a qualified botanist during the appropriate time of year to identify species of concern and should include areas with both direct and indirect impacts.

If no special status plant species are observed during the botanical survey, no other measures will be required. However, if drought conditions exist, additional pre-construction surveys for special status plant species may be warranted. If special status plant species are found during the botanical surveys, the plants should be marked by a qualified biologist familiar with the species. Impacts to special status species and sensitive natural communities found during surveys should be analyzed and specific mitigation would be required to reduce any impacts to less than significant. If the area can be avoided, exclusionary fencing should be placed around the plants and no pedestrian or vehicular entry shall be allowed. Botanical survey results shall be emailed to the Department at R1CEQARedding@wildlife.ca.gov.

The following are provisions that should also be considered with the implementation of this project:

Lighting

CDFW recognizes the adverse effects that artificial lighting has on birds and other nocturnal species. The effects are numerous and include impacts to singing and foraging behavior, reproductive behavior, navigation, and altered migration patterns. To minimize adverse effects of artificial light on wildlife, CDFW recommends that lighting fixtures associated with the Project be downward facing, fully shielded, and designed and installed to minimize photo-pollution and spillover of light onto adjacent wildlife habitat.

Avoid Inadvertent Entrapment of Wildlife

If applicable, trenched and excavated areas should be covered securely prior to stopping work each day, or a ramp should be provided to prevent wildlife entrapment. If pipes are left out on-site, they should be inspected for animals prior to burying, capping, moving, or filling. CDFW recommends a mitigation measure be developed and included in the MND to avoid inadvertent entrapment of wildlife. This measure could be as follows: To prevent the inadvertent entrapment of wildlife, the construction contractor shall ensure that, at the end of each workday, trenches and other excavations that are over one foot deep have been backfilled or covered with plywood or other hard material. If backfilling or covering is not feasible, one or more wildlife escape ramps constructed of earth fill or wooden planks shall be installed in the open trench. Pipes shall be inspected for wildlife prior to capping, moving, or placing backfill over the pipes to ensure that animals have not been trapped. If animals have been trapped, they shall be allowed to leave the area unharmed.

Native Vegetation in Landscaping

CDFW recommends utilizing vegetation native to the local area in landscaping whenever possible. Benefits of utilizing native vegetation in landscaping include providing resources for native wildlife such as hummingbirds and beneficial pollinators, conserving water, reducing pesticide use, and reducing landscaping maintenance. The California Native Plant Society (CNPS) website (https://www.cnps.org) includes a variety of useful information and tools to help determine which native species occur in a particular area, information on care and maintenance of native species, and contacts for purchasing native plants or seeds. The CNPS tool Calscape (https://calscape.org/) generates a list of native plants that grow in an area based on a specific address, and can be used to develop a planting palate for landscaping plans. A search of Calscape returned a wide variety of plants native to the Project site and surrounding landscapes. For more information regarding the importance of using native species in landscaping, please see the CNPS Guidelines for Landscaping to Protect Native Vegetation from Genetic Degradation at: https://www.cnps.org/wpcontent/uploads/2018/04/landscaping.pdf.

California Endangered Species Act

Please be advised that a CESA permit must be obtained if the project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will result in the take of a CESA-listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required to obtain a CESA Permit. Information on how to attain a CESA permit is available here: https://wildlife.ca.gov/Conservation/CESA/Permitting.

Please e-mail with any questions. I am also available via Microsoft Teams.

Kind Regards,
Erika

--
Erika Iacona
Environmental Scientist
Interior Habitat Conservation Planning
California Department of Fish and Wildlife
601 Locust Street
Redding, CA 96001

From: Gonzalez, Marcelino@DOT
To: Lio Salazar
Cc: Grah, Kathy M@DOT; Battles, Michael@DOT; Clark, Cherie D@DOT; Caruso, Brenda@DOT; Pascal, Anthony C@DOT; Chaffin, Fred N@DOT
Subject: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit
Date: Friday, October 7, 2022 12:27:19 PM
Attachments: image001.png
image002.jpg
image003.jpg
image004.jpg
Req'd Info For Drainage Review 6-7-22.pdf

EXTERNAL SENDER: Do not follow links or open attachments unless you recognize the sender and know the content is safe.

Lio,

Here are our comments,

A drainage report is requested.

We would prefer that the driveways on SR 299 be surrendered and the new sawmill utilize Black Ranch Road for access. If the new owners seek to continue use of the SR 299 access driveways a Caltrans encroachment permit is required for the change in ownership and use. The encroachment permit review will determine whether to allow the continued use.

The shoulders on Black Ranch Road where it connects to SR-299 are less than 4 feet. We recommend that the shoulders should be widened to 4 feet within the State R/W to allow for off-tracking of trucks, to minimize deterioration of the pavement and reduce maintenance work. A Caltrans encroachment permit isvrequired for the work in the highway right of way.

From: Rivas, Frank J@DOT <frank.rivas@dot.ca.gov>
Sent: Friday, September 16, 2022 11:39 AM
To: Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>; Chaffin, Fred N@DOT <fred.chaffin@dot.ca.gov>; Pascal, Anthony C@DOT <anthony.pascal@dot.ca.gov>; Norris, Daniel E@DOT <daniel.norris@dot.ca.gov>; Orr, Eric D@DOT <eric.orr@dot.ca.gov>; Mintz, Stephen@DOT <Stephen.Mintz@dot.ca.gov>
Cc: Grah, Kathy M@DOT <kathy.grah@dot.ca.gov>; Battles, Michael@DOT <Michael.Battles@dot.ca.gov>; Caruso, Brenda@DOT <Brenda.H.Caruso@dot.ca.gov>; Clark, Cherie D@DOT <cherie.clark@dot.ca.gov>; Reynolds, Todd@DOT <Todd.Reynolds@dot.ca.gov>; Quigley, Tamy D@DOT <tamy.quigley@dot.ca.gov>
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Hi Marci,

There is an existing left turn lane in the EB direction and a wide right shoulder in the WB direction that can be used for right turns. Sight distance looks adequate in both directions. Shoulders on Black Ranch Road where it connects to SR-299 are less than 4'. The shoulders should be widened to 4' within the State R/W to allow for off-tracking of trucks, to minimize deterioration of the pavement and reduce maintenance work.

Thanks,

Frank Rivas P.E.
Chief, Traffic Operations
Caltrans District 2
(office) 530-225-3229
(cell) 530-768-4086

From: Chaffin, Fred N@DOT <fred.chaffin@dot.ca.gov>
Sent: Thursday, September 15, 2022 11:33 AM
To: Pascal, Anthony C@DOT <anthony.pascal@dot.ca.gov>; Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Justification would be:

1. CT makes an effort to minimize connections onto the highway, especially near public road connections
2. Consolidating turning movements to Black Ranch Rd would be a benefit to public safety.

FRED CHAFFIN, PE
Encroachment Permit Inspector
530-604-0387 cell

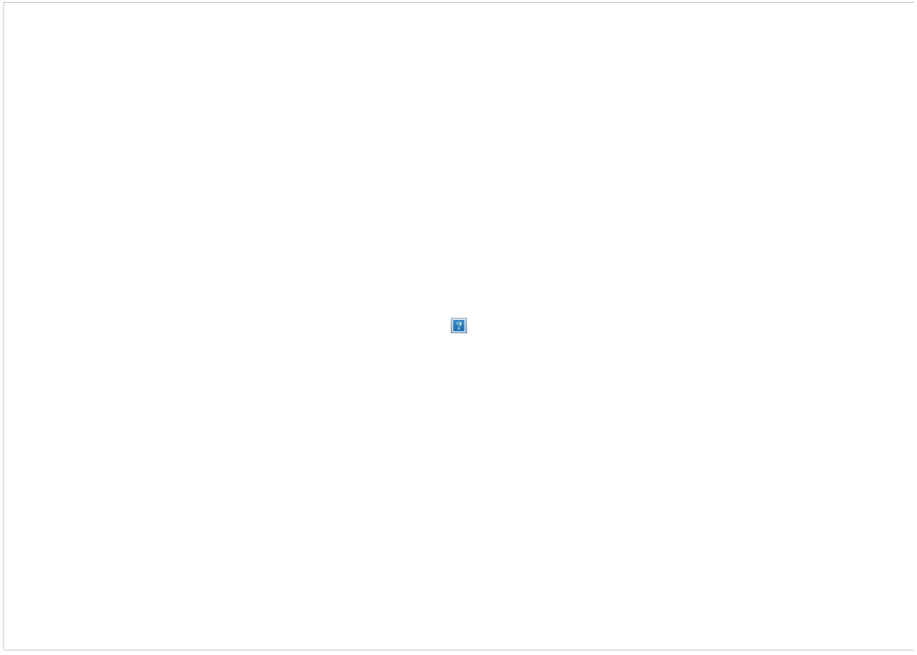
From: Pascal, Anthony C@DOT <anthony.pascal@dot.ca.gov>
Sent: Thursday, September 15, 2022 11:30 AM
To: Chaffin, Fred N@DOT <fred.chaffin@dot.ca.gov>; Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

What would be are justification for removing them it the we already permitted them, change in use? If I was the property owner I would not want to remove them.

From: Chaffin, Fred N@DOT <fred.chaffin@dot.ca.gov>
Sent: Thursday, September 15, 2022 11:25 AM
To: Pascal, Anthony C@DOT <anthony.pascal@dot.ca.gov>; Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Tony,

Would it be a good idea to remove those two road connections, due to the parcel having access from Black Ranch Road?



FRED CHAFFIN, PE
Encroachment Permit Inspector
530-604-0387 cell

From: Pascal, Anthony C@DOT <anthony.pascal@dot.ca.gov>
Sent: Thursday, September 15, 2022 11:11 AM
To:
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Hi Marci, They will need to get a new permit if there is a change of owner ship and/or use. From the pictures the driveways appear adequate, assuming there is AC under all pine cones.

Also is it worth discussing, requiring the trees cleared on their frontage that are within 52' of the edge or traveled way?

Thanks, Tony

From: Mintz, Stephen@DOT <Stephen.Mintz@dot.ca.gov>
Sent: Thursday, September 15, 2022 1:33 PM
To: Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>
Cc: Nixon, Robert J@DOT <robert.nixon@dot.ca.gov>
Subject: RE: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Hi Marci,
Per the application, section II, question 3, the existing buildings will be used for office space. The project site will generate more runoff if they pave ground or construct buildings.
If this is the case, we should request a drainage report that describes how any additional runoff will be handled. See the attached file.

Thank you,

Steve Mintz, P.E.
Caltrans N.R. Hydraulics, Redding
Monday – Friday: 8:00 - 4:30
530/812-7007
https://cadot.webex.com/meet/stephen.mintz
NRPD
North Region Project Development

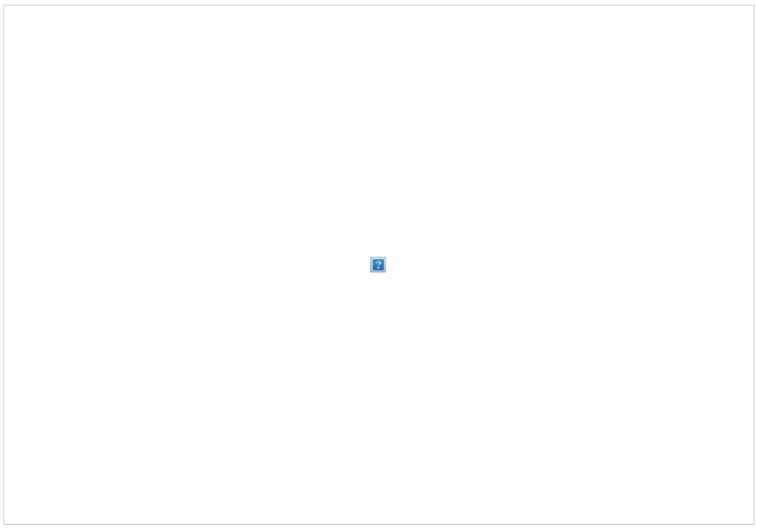
From: Gonzalez, Marcelino@DOT <marcelino.gonzalez@dot.ca.gov>
Sent: Thursday, September 15, 2022 10:52 AM
To:
Subject: Sha-299-76.26 and 76.32 McCloud RR site to Sawmill Use Permit Review due 10-11-22

Shasta County is processing a use permit in Burney to convert the former McCloud River Railroad yard to a small sawmill and bioenergy facility. Twelve (12) employees per shift plus trucks on Black Ranch Road.

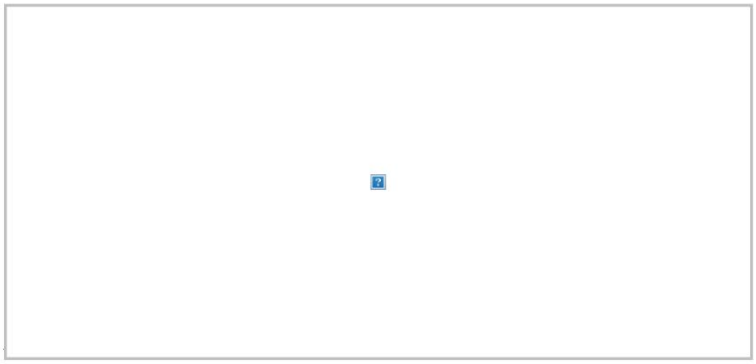
There are two driveways on SR 299 that provide access to the offices. The driveways were permitted in 1960 and the northerly driveway has a permit from 2000.

Let me know if we need drainage information and whether any improvements will be needed to the driveways in addition to a permit for the change in use and possible subsequent ownership change.

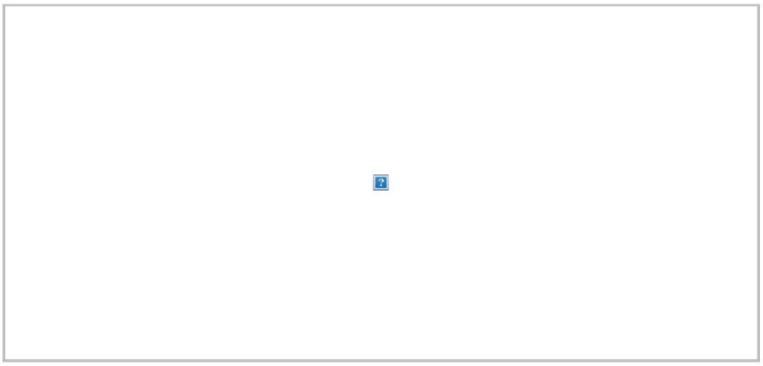
Any other comments or concerns let me know. Review comments due by October 11, 2022.



North End Driveway



South end



6 October 2022

Lio Salazar
Shasta County Department of Resource Management, Planning Division
1855 Placer Street, Suite 103
Redding, CA and 96001

COMMENTS ON ZONE AMENDMENT 22-0008 AND USE PERMIT 22-0002 (BAR OVER HEART ENTERPRISES, LLC), APN NUMBERS 030-390-066, 030-390-070, & 028-370-028, BURNEY, SHASTA COUNTY

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) is a responsible agency for this project, as defined by the California Environmental Quality Act (CEQA). On 13 September 2022, we received your request for comments on Zone Amendment 22-0008 and Use Permit 22-0002 (Bar Over Heart Enterprises, LLC) (Project).

The applicant proposes to rezone the project site from the Unclassified (U) and Light-Industrial/Design Review (M-L-DR) zone districts to the General Industrial (m) or other appropriate zone district and obtain a use permit for the construction and operation of a 5-megawatt bioenergy facility and a wood processing facility consisting of a small specialty sawmill, dry kilns, chipping and grinding operation, firewood sales, and office. The Project site is located in the Burney area on the east side of Black Ranch Road, approximately 0.45 miles north of the intersection of Black Ranch Road and State Highway 299 East.

Based on our review of the information submitted for the proposed project, we have the following comments:

General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)

Construction activity, including demolition, resulting in a land disturbance of one acre or more must obtain coverage under the CGP. The Project must be conditioned to implement storm water pollution controls during construction and post-construction as required by the CGP. To apply for coverage under the CGP the property owner must submit Permit Registration Documents electronically prior to construction. Detailed

information on the CGP can be found on the State Water Board website Water Boards Stormwater Construction Permits (https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml).

Industrial Storm Water

On 16 November 1990, the USEPA promulgated storm water regulations (40 CFR Parts 122, 123 & 124) which require specific categories of industrial facilities discharging storm water to obtain NPDES permits and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate industrial storm water pollution. These requirements apply to industries with a Standard Industrial Classification (SIC) 2421, sawmills and planning mills, general and 4911, Electric Services. Industrial operations with a 2421 and/or 4911 SIC code must be covered by a General Permit for *Discharges of Storm Water Associated with Industrial Activities*. Detailed information on the IGP can be found on the State Water Board website Water Boards Storm Water Multiple Application and Report Tracking System (https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml).

If you have any questions or comments regarding this matter, please contact me at (530) 224-4784 or by email at Jerred.Ferguson@waterboards.ca.gov.

Jerred T Ferguson
Digitally signed by Jerred T Ferguson
Date: 2022.10.06 09:27:36 -07'00'
Water Boards

Jerred Ferguson
Environmental Scientist
Storm Water & Water Quality Certification Unit

JTF: db

cc:
via email: Doug Lindgren, Bar Over Heart Enterprises, LLC, Burney
Susan Goodwin, VESTRA Resources, Inc., Redding

ADDITIONAL SOURCES OF DOCUMENTATION FOR INITIAL STUDY CHECKLIST

All headings of this source document correspond to the headings of the initial study checklist. In addition to the resources listed below, initial study analysis may also be based on field observations by the staff person responsible for completing the initial study. Most resource materials are on file in the office of the Shasta County Department of Resource Management, Planning Division, 1855 Placer Street, Suite 103, Redding, CA 96001, Phone: (530) 225-5532.

GENERAL PLAN AND ZONING

1. Shasta County General Plan and land use designation maps.
2. Applicable community plans, airport plans and specific plans.
3. Shasta County Zoning Ordinance (Shasta County Code Title 17) and zone district maps.

ENVIRONMENTAL IMPACTS

5. AESTHETICS

1. Shasta County General Plan, Section 6.8 Scenic Highways, and Section 7.6 Design Review. Zoning Standards per Shasta County Code, Title 17.

II. AGRICULTURAL AND FORESTRY RESOURCES

2-1 Shasta County General Plan, Section 6.1 Agricultural Lands.

2-2 Shasta County Important Farmland 2016 Map, California Department of Conservation.

2-3 Shasta County General Plan, Section 6.2 Timber Lands.

2-4 Soil Survey of Shasta County Area, California, published by U.S. Department of Agriculture, Soil Conservation Service and Forest Service, August 1974.

III. AIR QUALITY

1. Shasta County General Plan Section, 6.5 Air Quality.
2. Northern Sacramento Valley Air Basin, 2021 Air Quality Attainment Plan.
3. Records of, or consultation with, the Shasta County Department of Resource Management, Air Quality Management District.

IV. BIOLOGICAL RESOURCES

1. Shasta County General Plan, Section 6.2 Timberlands, and Section 6.7 Fish and Wildlife Habitat.
2. Designated Endangered, Threatened, or Rare Plants and Candidates with Official Listing Dates, published by the California Department of Fish and Wildlife.
3. Natural Diversity Data Base Records of the California Department of Fish and Wildlife.
4. Federal Listing of Rare and Endangered Species.
5. Shasta County General Plan, Section 6.7 Fish and Wildlife Habitat.
6. State and Federal List of Endangered and Threatened Animals of California, published by the California Department of Fish and Wildlife.
7. Natural Diversity Data Base Records of the California Department of Fish and Wildlife.

V. CULTURAL RESOURCES

1. Shasta County General Plan, Section 6.10 Heritage Resources.
2. Records of, or consultation with, the following:
   a. The Northeast Information Center of the California Historical Resources Information System, Department of Anthropology, California State University, Chico.
   b. State Office of Historic Preservation.

c. Local Native American representatives.
d. Shasta Historical Society.

VI. ENERGY

- California Global Warming Solutions Act of 2006 (AB 32)
- California Code of Regulations Title 24, Part 6 – California Energy Code
- California Code of Regulations Title 24, Part 11 – California Green Building Standards Code (CALGreen)

VII. GEOLOGY AND SOILS

1. Shasta County General Plan, Section 5.1 Seismic and Geologic Hazards, Section 6.1 Agricultural Lands, and Section 6.3 Minerals.
2. County of Shasta, Erosion and Sediment Control Standards, Design Manual
3. Soil Survey of Shasta County Area, California, published by U.S. Department of Agriculture, Soil Conservation Service and Forest Service, August 1974.
4. Alquist - Priolo, Earthquake Fault Zoning Maps.

VIII. GREENHOUSE GAS EMISSIONS

1. Shasta Regional Climate Action Plan
2. California Air Pollution Control Officers Association (White Paper) CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act

IX. HAZARDS AND HAZARDOUS MATERIALS

1. Shasta County General Plan, Section 5.4 Fire Safety and Sheriff Protection, and Section 5.6 Hazardous Materials.

o City of Anderson and County of Shasta Multi-Jurisdictional Hazard Mitigation Plan

3. Records of, or consultation with, the following:
   a. Shasta County Department of Resource Management, Environmental Health Division.
   b. Shasta County Fire Prevention Officer.
   c. Shasta County Sheriff's Department, Office of Emergency Services.
   d. Shasta County Department of Public Works.
   e. California Environmental Protection Agency, California Regional Water Quality Control Board, Central Valley Region.

X. HYDROLOGY AND WATER QUALITY

1. Shasta County General Plan, Section 5.2 Flood Protection, Section 5.3 Dam Failure Inundation, and Section 6.6 Water Resources and Water Quality.
2. Flood Boundary and Floodway Maps and Flood Insurance Rate Maps for Shasta County prepared by the Federal Emergency Management Agency, as revised to date.
3. Records of, or consultation with, the Shasta County Department of Public Works acting as the Flood Control Agency and Community Water Systems manager.

XI. LAND USE AND PLANNING

1. Shasta County General Plan land use designation maps and zone district maps.
2. Shasta County Assessor's Office land use data.

XII. MINERAL RESOURCES

o Shasta County General Plan Section 6.3 Minerals.

o

XIII. NOISE

1. Shasta County General Plan, Section 5.5 Noise and Technical Appendix B.

XIV. POPULATION AND HOUSING

1. Shasta County General Plan, Section 7.1 Community Organization and Development Patterns.
2. Census data from U.S. Department of Commerce, Bureau of the Census.
3. Census data from the California Department of Finance.
4. Shasta County General Plan, Section 7.3 Housing Element.
5. Shasta County Department of Housing and Community Action Programs.

XV. PUBLIC SERVICES

1. Shasta County General Plan, Section 7.5 Public Facilities.
2. Records of, or consultation with, the following:
   a. Shasta County Fire Prevention Officer.
   b. Shasta County Sheriff's Department.
   c. Shasta County Office of Education.
   d. Shasta County Department of Public Works.

XVI. RECREATION

1. Shasta County General Plan, Section 6.9 Open Space and Recreation.

XVII. TRANSPORTATION/TRAFFIC

1. Shasta County General Plan, Section 7.4 Circulation.
2. Records of, or consultation with, the following:
   a. Shasta County Department of Public Works.
   b. Shasta County Regional Transportation Planning Agency.
   c. Shasta County Congestion Management Plan/Transit Development Plan.
3. Institute of Transportation Engineers, Trip Generation Rates.

XVIII. TRIBAL CULTURAL RESOURCES

1. Tribal Consultation in accordance with Public Resources Code section 21080.3.1

XIX. UTILITIES AND SERVICE SYSTEMS

1. Records of, or consultation with, the following:
   a. Pacific Gas and Electric Company.
   b. Pacific Power and Light Company.
   c. Pacific Bell Telephone Company.
   d. Citizens Utilities Company.
   e. T.C.I.
   f. Marks Cablevision.
   g. Shasta County Department of Resource Management, Environmental Health Division.
   h. Shasta County Department of Public Works.

XX. WILDFIRE

a) Office of the State Fire Marshall-CALFIRE Fire Hazard Severity Zone Maps

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

None

MITIGATION MONITORING PROGRAM (MMP)
FOR USE PERMIT 22-0002 (BAR OVER HEART ENTERPRISES, LLC)

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
I. AESTHETICS			
MM AES-1: Construct Visual Barrier A visual barrier consisting of a solid fence (cyclone fence with slats) and native trees/vegetation shall be constructed between project operations and the adjacent Great Shasta Rail Trail alignment and parking area. The barrier shall be constructed sufficiently tall and long enough to screen the majority of activities at the project site (excluding the bioenergy facility stack) from view of trail users.	Prior to Building Permit Issuance Prior to Final Inspection/ Commencement of Operations	Shasta County Planning Division	
III. AIR QUALITY			
MM AIR-1: Implement SMM for NOx and Fugitive Dust Emissions during project construction: 1. Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas (previously graded areas inactive for ten days or more). 2. All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour. 3. Temporary traffic control shall be provided as appropriate during all phases of construction to improve traffic flow (e.g., flag person).	During Grading, Construction and Operations	Shasta County Planning Division Shasta County Air Quality Management District	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
4. Construction activities that could affect traffic flow shall be scheduled in off-peak hours. 5. Active construction areas, haul roads, etc., shall be watered at least twice daily or more as needed to limit dust. 6. Exposed stockpiles of soil and other backfill material shall either be covered, watered, or have soil binders added to inhibit dust and wind erosion. 7. All truck hauling solid and other loose material shall be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer). This provision is enforced by local law enforcement agencies. 8. All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads. Wheel washers shall be used where vehicles enter and exit unpaved roads onto paved roads, or trucks and any equipment shall be washed off leaving the site with each trip. 9. All vehicle speeds on unpaved surfaces shall be limited to 15 miles per hour. 10. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.			

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
11. A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. 12. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. 13. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 14. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. 15. All off-road equipment larger than 50 horsepower shall have engines that meet or exceed USEPA or CARB Tier 3 off-road emission standards and Level 3 Diesel Particulate Filters. Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the agency and demonstrated to reduce community risk impacts to less-than-significant.			

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
16. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet CARB's 2010 engine emissions standards at 0.01 g/hp-hour of particulate matter and 0.20 g/hp-hour of NO_x emissions or newer, cleaner trucks. 17. The VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.			
IV. BIOLOGICAL RESOURCES			
MM BIO-1*:* Surveys for nesting birds if tree removal at the project site occurs within nesting season. In order to avoid impacts to nesting migratory birds and/or raptors protected under federal Migratory Bird Treaty Act and California Fish and Game Code Section 3503 and Section 3503.5, including their nests and eggs, one of the following shall be implemented: a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or b. If vegetation removal or ground disturbance activities occur during the nesting season (February 1 through August 31), a pre-construction nesting survey shall be conducted by a qualified biologist within 14 days of vegetation removal or construction activities. If an active nest is located during the preconstruction surveys, a non-disturbance buffer shall be established around the nest by a qualified biologist in	Prior to Commencement of Grading or Tree Removal During Grading, Construction and Operations	Shasta County Planning Division California Department of Fish and Wildlife	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
consultation with the California Department of Fish and Wildlife (CDFW). No vegetation removal or construction activities shall occur within this non-disturbance buffer until the young have fledged, as determined through additional monitoring by the qualified biologist. The results of the pre-construction surveys shall be sent electronically to CDFW at R1CEQARedding@wildlife.ca.gov **MM BIO-2: Surveys for special-status plants prior to additional ground disturbance.** ~~Prior to ground disturbance at the project site, the applicant shall retain a qualified Biologist to conduct protocol-level surveys during the appropriate flowering window for Lassen paintbrush (*Castilleja lassenensis*) and Jepson's dodder as well as a general floristic survey to determine whether any other special status plant species that are not known to occur in the vicinity and/or for which no potential habitat was observed during the site visit was conducted by a qualified VESTRA Biologist in April of 2021.~~ If new ground disturbance occurs within habitat for Lassen paintbrush or Jepson's dodder five or more years following completion of the August 2023 botanical survey, then the applicant shall retain a qualified Biologist to conduct protocol-level surveys during the appropriate flowering window for the species. Surveys shall comply with survey protocols for plants species listed under the California Endangered Species Act and Federal Endangered Species Act and the California Department of Fish and Wildlife (CDFW) March 20, 2018, *Protocols for*	Prior to Commencement of Grading During Grading and Construction	Shasta County Planning Division California Department of Fish and Wildlife U.S. Fish and Wildlife Service	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. A report summarizing the findings of surveys will be prepared and submitted to the County and CDFW. In the event sensitive species are identified on the project site, the plants should be marked by a qualified biologist familiar with the species and the Biologist shall consult with CDFW and the U.S. Fish and Wildlife Service (USFWS) to determine appropriate measures to reduce the impact of identified species to a less-than-significant level, including but not limited to, the establishment of an avoidance buffer around the plant(s) that is adequate to prevent direct and indirect disturbance to the plant(s). Fencing shall be installed at the perimeter of the buffer area and shall be maintained by the operator. If avoidance is not possible, the biologist will be contacted to coordinate seed collection from the plant(s) for propagation and restoration on-site, in consultation with CDFW. Other mitigation, including but not limited to conservation, establishment, or restoration of the species off-site, may be required if seed collection or onsite propagation is not possible. The final survey report, including if necessary, a written description of the required measures(s) and site plan showing the location of the special status plant(s) and measures shall be provided to the Shasta County Planning Division, CDFW, and USFWS prior to initiation of ground disturbing activities. **MM BIO-3: Preconstruction surveys for long-eared myotis prior to tree removal at the site.**	Prior to Commencement of Grading or Tree Removal During Grading and Construction	Shasta County Planning Division	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
The a In order to avoid impacts to bats, the following shall be implemented: a. Conduct removal and disturbance of trees outside of the bat maternity season and bat hibernacula (September 1 to October 31); or b. If removal or disturbance of trees will occur during the bat maternity season, when young are non-volant (March 1 - August 31), or during the bat hibernacula (November 1 - March 1), large trees (those greater than 6 inches in diameter) shall be thoroughly surveyed for cavities, crevices, and/or exfoliated bark that may have high potential to be used by bats within 14 days of tree removal or disturbance. The survey shall be conducted by a qualified biologist or arborist familiar with these features to determine if tree features and habitat elements are present. Trees with features potentially suitable for bat roosting should be clearly marked prior to removal and humane evictions must be conducted by or under the supervision of a biologist with specific experience conducting exclusions. Humane exclusions could consist of a two-day tree removal process whereby the non-habitat trees and brush are removed along with certain tree limbs on the first day and the remainder of the tree on the second day.	During Grading and Construction	Shasta County Planning Division	
MM BIO-4: Stop work if individuals are encountered. If any special-status mammal or other wildlife is observed within the project site during construction or operation of the project, activities with the potential to impact the animal will	During Grading and Construction	Shasta County Planning Division	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
cease until the animal has moved out of harm's way on its own accord. **MM BIO-5: Provide escape from trenches and/or excavation areas.** Prior to stopping work each day any open trench and/or excavation areas shall be covered securely, or a wildlife exit ramp shall be provided in the trench to prevent entrapment, and any pipes left out onsite shall be inspected for wildlife prior to burying, capping, moving or filling. Dimensions of the ramps shall be a minimum of 12 inches wide and will not exceed a 2:1 slope. **MM BIO-6: Education program to prevent nighttime traffic collisions** Employees who will be responsible for driving to/from the facility during nocturnal hours will receive awareness training about the potential for wildlife encounters while driving at night.	Prior to Commencement of Grading or Construction	Shasta County Planning Division	
X. HYDROLOGY			
MM HYD-1: Provide final drainage plan. Prior to approval of the first grading or building permit the applicant shall provide a final drainage plan, including a final design for the proposed vegetative swale, final drainage report prepared in accordance with Caltrans standards, and maintenance plan for the vegetative swale, including for mosquito control. The final drainage report shall, based on the	Prior to Grading or Building Permit Issuance	Shasta County Planning Division Shasta County Department of Public Works Caltrans	

Mitigation Measure/Condition	Timing/Implementation	Enforcement/Monitoring	Verification (Date & Initials)
design criteria of the applicable agencies responsible for maintaining the conveyance(s), demonstrate that the proposed drainage facilities will not result increase the peak rate and/or volume of runoff to county and/or Caltrans drainage facilities in excess of the capacity of existing improvements. If the preliminary design of the proposed vegetative cannot achieve this standard, additional on-site Best Management Practices (BMPs) shall be implemented, including but not limited to constructing landscaped areas near buildings and directing rooftop run-off to these areas, placement of rain barrels to capture roof top run-off, and/or reducing impervious surface area where feasible. The final drainage plan shall be implemented prior to initiating the proposed use(s) and may be achieved incrementally based on the phasing of construction and initiation of the use(s).			

XIII. NOISE			
NOI-1: Limit Construction Hours Construction will occur between 7:00 a.m. and 10:00 p.m. Exceptions are allowed if it can be shown that construction beyond these times is necessary to alleviate traffic congestion and safety hazards. On occasions, when activities related to construction at the project site must occur between 10:00 p.m. and 7:00 a.m., neighbors will be notified in advance.	During Grading, Construction and Operations	Shasta County Planning Division	
NOI-2: Attenuation of Biomass Plant Noise Levels An acoustical analysis will be conducted prior to issuance of the first building permit for construction of the bioenergy facility to establish existing ambient baseline noise levels in the vicinity of the project site. The bioenergy plant building will be constructed to provide the attenuation required to meet the Shasta County noise standards for non-transportation noise sources (55 dB Leq between 7:00 a.m. and 10:00 p.m. and 50 dB Leq between 10:00 p.m. and 7:00 a.m.) at the property line of the closest noise-sensitive land use to the bioenergy facility estimated to be 950 feet due north of the project site boundary. The County can impose noise level standards which are more restrictive than those specified above based upon determination of low ambient noise levels. The Federal Interagency Committee on Noise (FICON) developed noise guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level at the closest sensitive receptors to the project site. Based upon FICON recommended noise evaluation for ambient noise levels less than 60 dB, an increase of 5 dB or	Prior to Issuance of First Building Permit Prior to Commencement of Operations	Shasta County Planning Division	

greater would be considered significant at the closest sensitive receptor. Noise measurements will be conducted at the property line of the closest noise-sensitive land use following construction of the bioenergy facility to ensure noise levels generated by the plant do not exceed Shasta County Noise standards or an increase of greater than 5 dB over existing ambient noise levels (if existing ambient noise levels are less than 50 dB) at the nearest noise-sensitive land use. Measures to control noise from the facility could include locating all plant and/or processing activities indoors where possible, acoustically treating and sealing the building to prevent noise breakout, keeping doors closed except for entry and exit of vehicles, fitting all internal noise-generating equipment with acoustical enclosures, acoustically treating external air-cooled condenser fans, and minimizing tonal exhaust from the stack through fitting of a silencer within the stack. **NOI-3: Limit Hours of Unloading Feedstock and Wood Product Operations** Loading and unloading of feedstock, timber, lumber, or logs/slash and operation of equipment associated with wood production activities will be limited to 7:00 a.m. to 10:00 p.m.	During Operations	Shasta County Planning Division	

Figures