

**CEQA Initial Study and Mitigated Negative Declaration
For
CISCO FARMS, INC.
PLN-2021-17384**

Proposed Cannabis Cultivation Facilities

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Invasive Species Control Plan (Naiad Biological Consulting, October 2020)

Golden Eagle Survey Report (Erin Phillips, Naiad Biological Consulting, February 2022)

Road Evaluation (OurEvolution Engineering, March 2021)

Cultural Resources Investigation Report for Commercial Cannabis Cultivation at APN 104-232-005 and APN 105-101-011 in Petrolia, Humboldt County, California (William Rich and Associates, May 2021)
– on file with Humboldt County Planning and Building Department

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Web Soil Survey Soil Type Map (Natural Resources Conservation Service, Web Soil Survey, February 2022)

Letter to Humboldt County: “Agricultural activities and relation to Williamson Act” (Cenci Consulting, December 2021)

CalEEMod Analysis for Cisco Farms, Inc. Cannabis Project (NorthPoint Consulting, April 2022)

Notice of Applicability for Waste Discharge Requirements, Water Quality Order WQ 2019-0001-DWQ for WDID 1_12CC428193 (State Water Resources Control Board, May 2022)

Executed Streambed Alteration Agreement No. EPIMS-HUM-18009-R1C (California Department of Fish and Wildlife, June 2022)

ACCRONYMS AND ABBREVIATIONS

ADA	American Disabilities Act
BACT	Best Available Control Technology
BMPs	Best Management Practices
BPTC	Best Practicable Treatment or Control
CalEEMod	California Emission Model (CalEEMod® Version 2020.40)
CAP	Climate Action Plan
CARB	California Air Resource Board
CBC	California Building Code
CCAC	California Clean Air Act
CCLUO	Commercial Cannabis Land Use Ordinance – Inland
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Pesticide Regulation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGP	Construction General Permit
CNEL	Community Noise Equivalent Level
CNNDB	California Natural Diversity Database
CNPS	California Native Plant Society
CUP	Conditional Use Permit
DCC	Department of Cannabis Control
DWR	Department of Water Resources
GHG	Greenhouse Gas
ISMND	Initial Study / Mitigated Negative Declaration
MSDS	Material Safety Data Sheets
NCAB	North Coast Air Basin
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
PM ₁₀	Particulate matter with a diameter of 10 micrometers or less
PG&E	Pacific Gas and Electric Company
RCEA	Redwood Coast Energy Authority
SIUR	Small Irrigation Use Registration
SMA	Streamside Management Area
SMP	Site Management Plan
Sq. ft.	Square feet
SAA	Streambed Alteration Agreement
SRA	State Responsibility Area
STX	Stream Crossing
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USFWS	US Fish & Wildlife Service
USGS	United States Geological Survey
WDID	Waste Discharge Identification

1. Background

- 1. Project Title:** Cisco Farms, Inc. Cannabis Project - Conditional Use Permit for five (5) acres of new commercial cannabis cultivation, 67,760 square feet (sq. ft.) of commercial nursery space and 3,000 sq. ft. of commercial processing on a single legal parcel comprised of three (3) Assessor Parcel Numbers (APNs) 105-101-011, 104-232-005, and 104-191-001 in unincorporated Humboldt County, California.
- 2. Lead Agency Name and Address:** Humboldt County Planning & Building Department, 3015 H Street, Eureka, CA 95501-4484; Phone: (707) 445-7541; Fax (707) 445-7446
- 3. Contact Person and Phone Number:** Michael Holtermann, Planner; (707) 445-7245; fax: 707-445-7446; email: mholtermann@co.humboldt.ca.us
- 4. Project Location:** The project site is located at 1414 Chambers Road, Petrolia, CA 95558, approximately 1-mile east of the town of Petrolia, on one legal parcel comprised of APNs 105-101-011, 104-232-005, and 104-191-001 (Section 2, Township 2 South, Range 2 West, Humboldt Base Meridian). The project site is located in an unincorporated area of Humboldt County. To reach the site from the Petrolia General Store, head North on Sherman Avenue and turn right on Grant Street. Continue on to Old Coast Wagon Road and continue to Mattole Road. Travel on Mattole Road for 0.2 miles and turn left onto Chambers Road. The gated private driveway to access the site will be on the left after 1.5 miles down Chambers Road.
- 5. Project Sponsor's Name and Address:**

Applicant	Property Owner	Agent
Cisco Farms, Inc. P.O. Box 1083 Trinidad, CA 95570	Benemann Family Trust P.O. Box 1083 Trinidad, CA 95570	Kate Cenci P.O. Box 148 Petrolia, CA 95558

- 6. General Plan Designation:** Agricultural Grazing (AG).
- 7. Zoning:** Agriculture Exclusive (AE).
- 8. Project Site:** The project site is located at 1414 Chambers Road (APNs 105-101-011, 104-232-005, 104-191-001) approximately 1-mile east of the community of Petrolia. The parcel is approximately 517 acres in size per an approved parcel merger (Record No. PLN-2020-16522) and contains elevations ranging from 225 to 860 feet above sea level. The project site is located in Section 2, Township 2 South, Range 2 West (S2, T2S, R2W), of the Humboldt Base and Meridian. The parcel contains grassland, woodland, and riparian habitats, and is currently used for cattle grazing. The proposed project would occur on a grassland area currently used for cattle grazing, that is not designated as Prime Agricultural Soils, with slopes of less than 15%. The parcel is under a Williamson Act Contract.

The property contains several watercourses, including Mill Creek, a perennial (Class I) watercourse, two seasonal (Class II) watercourses, and several ephemeral (Class III) drainages. Appropriate buffers (150 ft., 100 ft., and 50 ft., respectively) have been designated for these watercourses in accordance with County and State requirements. All watercourses generally flow westerly through the parcel and are tributaries to the Mattole River. No mapped wetlands were identified within the Proposed Project site.

Existing onsite development includes a ±1,900-sq. ft. residence and associated septic system, four (4) agricultural barns, fuel storage structures associated with agricultural activities, gravel and natural-surfaced roads, three (3) 500-gallon fuel tanks, a domestic spring diversion with associated water storage (2 x 3,600-gallon HDPE water tank and 3 x 1,000-gallon concrete water tanks), and two (2) livestock groundwater wells with associated well houses and water storage (1 x 5,000-gallon HDPE storage tank).

- 9. Description of Project:** Cisco Farms, Inc. is seeking a Conditional Use Permit for 5 acres of new commercial cannabis cultivation (3 acres of full-sun outdoor, 1 acre of light-deprivation outdoor, and 1 acre of mixed-light), commercial processing, and commercial nursery activities (Table 1) in accordance with the Commercial Cannabis Land Use Ordinance (CCLUO).

Specifically, the “Proposed Project” includes the following activities (Appendix 1 – Site Maps):

- Five Acres of Commercial Cannabis Cultivation:
 - Three (3) acres (130,680 square feet [sq. ft.]) of full-sun outdoor cultivation in soil beds or planted in-ground within an approximately 10-acre garden area (See Appendix A - “OD-1” on Site Maps)
 - One (1) acre (43,560 sq. ft.) of light-deprivation outdoor cultivation with no artificial light in seventeen (17) 105’ x 24’ greenhouses and one (1) 30’ x 24’ greenhouse (“GH-1”)
 - One (1) acre (43,560 sq. ft.) of mixed-light cultivation with supplemental lighting up to 25 watts/sq. ft. in gutter-connected greenhouses totaling 218’ x 200’ (ML-1);
- 67,760 sq. ft. of Commercial Nursery:
 - 21,440 sq. ft. inside 107’ x 200’ gutter-connected greenhouse (CN-1)
 - 40,320 sq. ft. in sixteen (16) 105’ x 24’ greenhouses (CN-2)
 - 6,000 sq. ft. in two (2) 30’ x 100’ buildings (CN-3);
- 3,000 sq. ft. of commercial processing activities in a 30’ x 100’ commercial processing building;
- 19,200 sq. ft. of ancillary drying and storage space inside four (4) 40’ x 120’ agriculture-exempt structures;
- A new groundwater well for non-irrigation water uses
- Rainwater catchment infrastructure and storage for irrigation water, including construction of a 2.65-million-gallon capacity rainwater catchment pond and installation of 40 x 5,000-gallon plastic water storage tanks (38 irrigation tanks and two (2) tanks designated for “Fire Use Only”);
 - An additional 14 x 5,000-gallon plastic water storage tanks would be added to the site if the proposed well was unable to be used for non-irrigation water
- PG&E upgrade and associated infrastructure;
- Installation of a 323kW-capacity roof-mounted solar photovoltaic power system;
- Four (4) compost areas;
- 34 parking spaces, including two (2) ADA space for employees;
- 1,280 sq. ft. of farmworker housing in four (4) 40’ x 8’ modular housing units;
- Septic system associated with the commercial processing building and farmworker housing;
- Upgrade two existing culverts; and
- Site grading, drainage, and erosion control.

With all improvements included, the Proposed Project would disturb approximately seven (7) acres of existing grassland on the 517-acre parcel.

Table 1: Proposed Discretionary Cannabis Activities and Associated Locations

I.D.	Description	Full-Sun Outdoor Cultivation (sq. ft.)	Mixed-Light Cultivation (sq. ft.)	Light-Deprivation Outdoor Cultivation (sq. ft.)	Commercial Nursery (sq. ft.)	Commercial Processing (sq. ft.)
OD-1	<P> Soil Beds or in Native Soil	130,680	-	-	-	-
GH-1	<P> (17) 105' x 24' Greenhouses	-	-	42,840	-	-
	<P> 30' x 24' Greenhouse	-	-	720	-	-
ML-1	<P> 218' x 200' Gutter-Connect Greenhouse	-	43,560	-	-	-
CN-1	<P> 107' x 200' Gutter-Connect Greenhouse	-	-	-	21,440	-
CN-2	<P> (16) 105' x 24' Greenhouses	-	-	-	40,320	-
CN-3	<P> (2) 30' x 100' Nursery Buildings	-	-	-	6,000	-
-	<P> 30' x 100' Commercial Building	-	-	-	-	3,000
Subtotals		130,680 (3 acres)	43,560 (1 acre)	43,560 (1 acre)	67,760 (1.56 acres)	3,000 (0.07 acres)
Total Cultivation Canopy Area		217,800 sq. ft. (5 acres)			-	-
Total Proposed Commercial Cannabis Activity: 288,560 sq. ft. (6.6 acres)						

Access/Parking: The Proposed Project site is located approximately 1 mile east of the community of Petrolia off of Chambers Road. Chambers Road is a county-maintained, Category 4 road to the property gate. The onsite road network is in good condition and is comprised of existing gravel and natural-surfaced roads. A fire turn-around area is proposed near the area proposed for cultivation activities. Thirty-four (34) parking spaces, including two (2) ADA-compliant parking spaces, would be located near the proposed processing facility and cultivation area (Appendix 1 – Site Maps).

Water Source, Storage, and Use: Water for irrigation would be sourced solely from rainwater catchment captured in a proposed 2.65-million-gallon capacity rainwater catchment pond and 190,000 gallons (38 x 5,000-gallon tanks) of hard storage tanks plumbed to catchment surfaces for a total of 2,840,000 gallons of proposed water storage. Accounting for evaporation, the proposed pond is sized sufficiently in combination with the tanks to supply all the water storage required for cultivation activities. Projected water demand for other project components would be 111,709 gallons, (including 10,429 gallons for processing and 101,280 gallons of water for farmworker housing). Water for fire suppression would be stored in two (2) 5,000-gallon tanks, designated as “Fire Use Only”. Water for processing and farmworker housing would be sourced from a proposed groundwater well. (Note: An engineered grading permit for the proposed pond was submitted to the Humboldt

County Planning and Building Department on March 15th, 2021 (BLD-2021-53539). Permit BLD-2021-53539 is ready to issue upon approval of the Conditional Use Permit for the Proposed Project.)

Projected total water demand for proposed commercial cannabis cultivation is 2,154,095 gallons, including 1,807,276 gallons for mature plant cultivation and 346,819 gallons for nursery activities (Table 2). The total rainwater collection potential, including surface area of the pond, greenhouses, dry buildings, and the proposed processing and nursery buildings, during an average rainfall year of 73.93 inches is approximately 8,301,376 gallons (Table 3). The total irrigation demand plus pond evaporation is approximately 2,832,024 gallons (Table 4). During drought years, the total collection potential varies from 3,058,697 gallons to 3,974,959 gallons, depending on the dataset used to estimate the lowest rainfall on record (Table 3), which is sufficient to meet the proposed demand, even during the minimum precipitation year on record of 27.24 inches and accounting for pond evaporation.

Table 2: Monthly and Annual Water Use for Irrigation Activities (Source: Cultivation and Operations Plan, Cenci 2021)

Month	Mixed-Light	Light-Dep	Full-Sun Outdoor	Nursery	Total Cultivation
January	-	-	-	11,530	11,530
February	-	-	-	28,862	28,862
March	11,575	-	-	55,492	67,067
April	112,011	70,438	-	62,700	245,149
May	117,239	116,771	20,211	67,016	321,237
June	113,878	112,568	67,998	43,894	338,338
July	117,239	116,646	128,600	50,733	413,218
August	117,674	116,460	128,600	10,216	372,951
September	47,231	99,068	124,452	5,174	275,926
October	-	-	61,767	3,354	65,121
November	-	-	6,849	2,867	9,716
December	-	-	-	4,982	4,982
TOTAL	636,847	631,951	538,478	346,819	2,154,095

Note: Components may not sum to totals because of rounding.

Table 3: Rain-catchment Surfaces and Water Collection Potential (in Gallons) for Average and Dry Years (Source: Cultivation and Operations Plan, Cenci 2021)

Rain-catchment Facility	Catchment Surface Material	Footprint (sf)	PRISM 30-Yr Average (73.93 in)	PRISM Record Low (2013: 29.33 in)	CoCoRaHS Record Low (2020: 35.4 in)	NCWAP Record Low (1977: 27.24 in)
Pond	EPDM, polyethylene	46,367	2,136,878	847,756	1,023,204	787,347
Gutter-connect Greenhouses	acrylite, acrylic, polycarbonate	65,000	2,995,607	1,188,437	1,434,390	1,103,751
Stand-alone Greenhouses	polyethylene	43,560	2,007,518	796,436	961,262	739,683
Drying Buildings	galvanized steel, Galvalume	19,200	884,856	351,046	423,697	326,031
Nursery & Processing Buildings	galvanized steel, Galvalume	6,000	276,518	109,702	132,405	101,885
TOTAL COLLECTION POTENTIAL (GAL)			8,301,376	3,293,377	3,974,959	3,058,697

Table 4: Total Proposed Project Monthly and Annual Water Demand (in Gallons) (Source: Cultivation and Operations Plan, Cenci 2021)

Month	All Cultivation	Pond Evaporation	Processing	Employee Residence	Total Water Required
January	11,530	-	886	4,960	17,376
February	28,862	-	800	4,480	34,142
March	67,067	-	886	9,920	77,872
April	245,149	-	857	9,600	255,606
May	321,237	173,424	886	9,920	505,467
June	338,338	155,302	857	9,600	504,097
July	413,218	136,775	886	9,920	560,798
August	372,951	116,066	886	9,920	499,823
September	275,926	96,362	857	9,600	382,745
October	65,121	-	886	9,920	75,927
November	9,716	-	857	8,480	19,053
December	4,982	-	886	4,960	10,827
TOTAL	2,154,095	677,929	10,429	101,280	2,943,733

Non-irrigation water for domestic uses, including drinking, plumbing, and processing (e.g., handwashing, surface and tool cleaning, and toilet flushing) would be sourced from a proposed on-site well. Demand for non-irrigation water would total approximately 111,709 gallons annually, including 10,429 gallons for processing activities and 101,280 gallons for water use associated with the farmworker housing (Table 4).

Even though non-irrigation water would be sourced from a proposed well, there is sufficient rainwater catchment to supply the overall Proposed Project’s annual demand during both average and dry years. Rainwater catchment and groundwater well sources do not require registration in the State Water Resources Control Board’s (SWRCB’s) Small Irrigation Use Registration (SIUR) program. The California Department of Fish and Wildlife (CDFW) would be notified of the well once it is drilled. No diversionary water sources are proposed.

Hours/Days of Operation and Number of Employees: Activities associated with the proposed cultivation greenhouses and nursery greenhouses, including watering, transplanting, and harvesting, would generally occur during daylight hours with processing confined to the hours of 7:00 a.m. to 8:00 p.m., seven days a week. Twelve (12) employees would be employed year-round to manage and conduct day-to-day activities. An additional 22 contract laborers would be hired during peak seasonal events such as planting, harvesting, and processing. Peak seasonal events occur at regular intervals, typically between May through December. Non-peak times are January through April, when only managers and year-round laborers would be employed. Up to 8 employees may live on-site as the Proposed Project is currently proposed; additional employees would live off-site and commute daily to the Proposed Project site. See Table 5 for further details regarding employee projections.

Table 5: Employees by Activity and Classification (Source: Cultivation and Operations Plan, Cenci 2021)

ACTIVITY	MANAGERS	YEAR-ROUND LABORERS	SEASONAL / CONTRACT LABOR
Nursery (all)	1	2	4
Cultivation	1	6	10
Processing	1	-	8
Maintenance	1	-	0
<i>Classification Subtotal</i>	4	8	22
TOTAL EMPLOYEES	34		

Traffic: A period of 4 weeks of construction in 2022 is proposed to complete grading, pond construction, and site preparation for the 2023 season. During this period, it is expected that the construction contractors’ employees would make four trips per day, and one trip per day of dump truck or flatbed truck delivery. Larger equipment would be mobilized once at the beginning of construction of the Proposed Project, and out at the end of construction of the Proposed Project. Full build-out of the site would occur over a 5-year period (see Construction timeline, below).

At full-build out, during operations, the Proposed Project would result in an average of 8 daily trips by full-time employees and an additional 44 trips by seasonal contract laborers for a total of 52 daily trips during peak season events. The calculation of 8 daily trips was based off 8 of the 12 full-time workers living onsite, leaving 4 full-time employees to commute to the site twice daily. Cisco Farms, Inc. would encourage employee carpooling to help reduce the Proposed Project’s carbon footprint. Distribution activities would result in an average of 6 deliveries (12 trips) per month, and the commercial nursery would result in an average of 12 deliveries (24 trips) per month. Onsite vehicle and truck traffic would be required to maintain a 15-mph speed limit or less. A speed limit sign would be posted onsite.

Electrical Service and Generator Use: The Proposed Project would use existing electrical service, solar power, and a proposed electrical upgrade from Pacific Gas & Electric (PG&E). An application for a 600-amp service has been submitted to PG&E by the applicant. A roof-mounted solar photovoltaic power system would be installed on the proposed four (4) 4,800-sq. ft. drying buildings, the two (2) indoor 3,000-sq. ft. commercial nursery buildings (CN-3), the 3,000-sq. ft. processing building, and the four (4) 320-sq. ft. modular farmworker housing structures. This system has a total renewable energy power capacity of 323 kilowatts (kW) and is estimated to provide approximately 565,896 kilowatt-hours (kWh) of annual energy production, based on 4.8 annual average daily peak sun hours in Petrolia, California (Appendix 1 – Renewable Energy Table on Sheet C2 of Site Map).

Electricity would be required for cultivation (fans and lights), nursery, drying, and processing activities, security, and modular farmworker housing. Energy demand is calculated at a total of 639,962 kwh (Table 6). Solar power and the RCEA Power+ Plan or 100% Solar Choice Plan through PG&E would be utilized to meet renewable energy requirements. Energy demand would increase gradually over the proposed five-year build-out plan (refer to “Construction” description below), and the photovoltaic power system would be the primary source of power until a PG&E upgrade could be obtained.

Propane would be used in the nursery greenhouses to assist with plant propagation. An onsite generator would be kept for backup purposes only; use of any on-site generators would be limited to power outage events and would follow all guidelines set by Humboldt County and the State of California. The generator would be located away

Lighting and Signage: When artificial lighting is used for mixed-light cultivation there would be automated blackout covers in place to assure that light does not disturb wildlife, neighboring parcels, and that lighting complies with International Dark Sky Association Standards. All Proposed Project lighting would be designed and located so that it is confined to the property and that there is no spillover to adjacent properties. All signage would be in conformance with Humboldt County Code Section 314-87.2, unless otherwise permitted.

Site Drainage, Runoff, and Erosion Control: Cisco Farms, Inc., enrolled with the State Water Resources Control Board (SWRCB) for Tier 1, Low Risk coverage in March of 2021 under the Cannabis General Order. A Notice of Applicability was issued in May 2022, and the enrollee was assigned Waste Discharge ID (WDID) 1_12CC428193 (Appendix 2). Once an area greater than an acre has been disturbed onsite, the Tier would be upgraded with the SWRCB to Tier 2. Prior to commencing operations onsite, a Site Management Plan (SMP) will be developed utilizing Best Practicable Treatment or Control (BPTC) measures in accordance with the SWRCB's recommendations in the Cannabis General Order and Policy. Additional filings, monitoring, and furnishing of supporting documents once the Proposed Project is fully approved and developed would be coordinated with the SWRCB. The drainage and erosion control measures described below are required components of the SMP.

The SMP would include erosion prevention and sediment control BPTC Measures designed to prevent, contain, and reduce sources of sediment. The SMP also includes corrective actions to reduce sediment delivery and prevent erosion. Two existing culverted stream crossings are proposed to be upgraded to ensure passage of the 100-year streamflow event. Ongoing BPTC Measures would be implemented throughout the life of the Proposed Project, including proper storage of all liquid materials in secondary containment, safe storage of site refuse, site winterization activities, and ongoing monitoring of the site. All hazardous materials, including pesticides, fertilizers, soils, spoils piles, and cultivation waste, would be properly stored outside of riparian setbacks to protect water quality.

Construction BPTCs include implementing dust control measures such as road watering, conducting road work during the dry season, installing sediment capture measures such as straw wattles, and properly containing stockpiled materials outside of riparian setbacks.

As the Proposed Project would disturb more than one acre of the site during construction, the Proposed Project would be subject to the requirements SWRCB Construction General Permit (CGP). The SWRCB CGP would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) which documents the stormwater dynamics at the site, the Best Management Practices (BMPs), and water quality protection measures that are used, and the frequency of inspections. BMPs are activities or measures determined to be practicable, acceptable to the public, and cost effective in preventing water pollution or reducing the amount of pollution generated by non-point sources. Obtainment of a CGP is also a BPTC Measure for compliance with the SWRCB General Order.

Riparian Habitat, Wetlands, and Water Bodies: The property contains several watercourses, including Mill Creek, a perennial (Class I) watercourse, two seasonal (Class II) watercourses, and several ephemeral (Class III) drainages. Minimum appropriate buffers from watercourses have been established per the SWRCB General Order: 150 ft. from a Class I (perennial) watercourse, 100 ft. from a Class II (intermittent) watercourse, and 50 ft. from a Class III (ephemeral) watercourse, which are in excess of County-required buffers per the Streamside Management Ordinance of 50 ft. from an intermittent watercourse and 100 ft. from a perennial watercourse. A 2.65-million-gallon capacity rainwater catchment pond is proposed to store water for the Proposed Project.

Three (3) stream crossings (STX) exist onsite, including one bridge (STX-1) and two culverts (STX-2 and STX-3). STX-1 is a bridge located on an unnamed Class II intermittent watercourse that was replaced in 2008 as part

of a state-funded fisheries restoration project and is in good condition. STX-2 is an existing 48-inch diameter plastic culvert located on a Class II intermittent watercourse that is proposed to be upgraded to a 72-inch diameter arched culvert to sufficiently pass the expected 100-year streamflow event and associated debris. STX-3 is an existing 36-inch diameter plastic culvert located on a Class III ephemeral watercourse that is proposed to be upgraded to a 60-inch diameter culvert to sufficiently pass the expected 100-year streamflow event and associated debris. The California Department of Fish and Wildlife (CDFW) has been notified of the two proposed stream crossing upgrades (STX-2 and STX-3) and an executed Streambed Alteration Agreement (SAA) has been obtained (No. EPIMs-HUM-18009-R1C – Appendix 2).

The final Biological Resource Assessment (Appendix 2 - Naiad Biological Consulting, 2021) investigated the site for potential wetland areas in the vicinity near Proposed Project activities. No potential wetland areas were discovered in the vicinity near the Proposed Project area. An initial Biological Reconnaissance and Project Feasibility Assessment Report was conducted in October 2020 by Naiad Consulting to review the property and assess potential appropriate project-related sites and identify environmental constraints. One potential wetland area was identified onsite while investigating potential appropriate sites, located approximately 400 feet east of the existing barn and residence. The potential wetland area was not further evaluated or delineated in the final Biological Resource Assessment (2021), as the area is located over 1,700 feet from the Proposed Project area. No project components in the final Proposed Project are located near this potential wetland area.

Setbacks from watercourses are intended to help protect water quality and preserve riparian habitats for sensitive species. Additionally, a grading and erosion control plan would be filed to detail any proposed earthwork activities. (Note: An engineered grading permit for the proposed pond was submitted to the Humboldt County Planning and Building Department on March 15th, 2021 (BLD-2021-53539). Permit BLD-2021-53539 is ready to issue upon approval of the Conditional Use Permit for the Proposed Project.)

Waste & Wastewater System: There is an existing unpermitted septic system that serves the existing onsite residence. A second onsite wastewater treatment system is proposed to serve the Proposed Project needs (Appendix 2 – Onsite Wastewater Treatment System Design). The proposed leach field and septic tank would be located outside riparian setbacks. The restroom within the processing facility would be designed to meet Americans with Disabilities Act (ADA) standards of accessibility and would include a flushable toilet and a sink with cold and hot running water. Prior to construction, portable toilets and handwashing facilities would be provided onsite and serviced by a licensed provider.

The Proposed Project would generate solid waste in the form of cannabis plant material (e.g., stems, leaves, rootballs) and agricultural refuse (e.g., pots, fertilizer bags, empty containers, packaging, etc.), similar to other agricultural operations. The Proposed Project would also generate household-related waste, including trash (e.g., food wrappers) and recycling (e.g. bottles, cans). The applicant estimates that approximately 8,000 lbs. of plant material solid waste, 280 lbs. of agricultural refuse waste, 150 lbs. of non-recyclable/compostable household refuse, and 350 lbs. of household recyclables would be generated annually. Plant material would be chipped and composted onsite, as feasible. Refuse and recycling would be taken to the Humboldt Waste Management Authority in Eureka once every two weeks or as needed.

Construction: Proposed grading activities would be minimal and include preparation of a greenhouses and building pads/parking areas and a septic system. A grading permit would be submitted to the Humboldt County Building Division prior to commencement of activities. An engineered grading permit for the proposed pond has already been submitted. Normal means and methods would be used to construct the accessory building and greenhouses. Construction activities are expected to begin in the summer of 2022, with the exact start date dependent on permits, dry weather, and suitable soil conditions. Preparation of the cultivation areas would make

use of the equipment that would be onsite during the 2022 construction season. Cisco Farms, Inc. is proposing to stagger construction and build-out over a period of five years, as follows:

Year 1: Grading/scraping and construction of proposed rainwater catchment pond (as soon as possible after project approval), 10,000 sq. ft. of light-deprivation cultivation greenhouses (GH-1), 5,040 sq. ft. of nursery greenhouses (CN-2); preparation of ground for 1 acre of full-sun outdoor cultivation (OD-1)

Year 2: Grading/scraping and construction of 10,000 sq. ft. of light-deprivation greenhouses (GH-1), 5,040 sq. ft. of nursery greenhouses (CN-2), (1) 4,800 sq. ft. drying building, (1) 3,000 sq. ft. nursery building (CN-3); preparation of ground for 1 additional acre of full-sun outdoor cultivation (OD-1)

Year 3: Grading/scraping and construction of 10,000 sq. ft. of light-deprivation greenhouses (GH-1), 10,080 sq. ft. of nursery greenhouse (CN-2), (1) additional 4,800 sq. ft. drying building, (1) 3,000 sq. ft. commercial processing and associated septic system; preparation of ground for 1 additional acre of full-sun outdoor cultivation (OD-1)

Year 4: Grading/scraping and construction of 13,560 sq. ft. of light-deprivation greenhouses (GH-1), 5,040 sq. ft. of nursery greenhouses (CN-2), (1) additional 4,800 sq. ft. drying building, 2 employee housing units and associated septic system

Year 5: Grading/scraping and construction of 43,560 sq. ft. of mixed-light gutter-connect greenhouses (ML-1), 21,440 sq. ft. nursery in gutter-connect greenhouses (CN-1), 15,120 sq. ft. of nursery greenhouses (CN-2), (1) 3,000 sq. ft. nursery building (CN-3), (1) additional 4,800 drying building, (2) additional employee housing units

The duration of the construction during each year is expected to take approximately 10 weeks. All construction staging areas would be located within the Proposed Project site and outside of all identified wetland and riparian setbacks. During construction, the following dust control measures would be implemented:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered as needed.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. Adjacent public roads shall be kept clean of loose dirt tracked onto the roadways from the construction-site.

10. Surrounding Land Uses and Setting: The Proposed Project is located approximately 1 mile east of Petrolia off of Chambers Road. Surrounding land uses consist of other commercial cannabis operations, rural residential homes, agricultural operations, and natural space. The property is zoned Agriculture Exclusive (AE) and has a General Plan Land Use Designation of Agricultural Grazing (AG). Surrounding properties are zoned AE, Unclassified (U), and Timberland Production Zone (TPZ). Surrounding land use designations adjacent to the property are Agricultural Grazing, Residential Agriculture (RA5-20), and Timberland (T).

11. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreements). Since the Proposed Project would disturb more than one acre of the site, the Proposed Project would be subject to the requirements State Water Resources Control Board (SWRCB) Construction General Permit (CGP). Locally, permits from the Humboldt County Building Division, Humboldt County Planning Division, and Division of Environmental Health are required. The California Department of Fish and Wildlife (CDFW) was notified of the two (2) stream crossing upgrades and the domestic point of diversion in April of 2021, and a final executed Agreement was obtained in June 2022. Cisco Farms, Inc. has enrolled with the SWRCB for coverage under Order No. 2019-0001-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities

(“Cannabis General Order”). Upon approval of the Proposed Project, Cisco Farms, Inc. would apply for State of California Commercial Cannabis Licenses from the Department of Cannabis Control (DCC).



Figure 1: Proposed Project Vicinity (Source: Cultural Resources Investigation - William Rich & Associates, 2021)

12. 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.

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the 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 project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the 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 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 project, nothing further is required.



Signature

7/21/2022

Date

Desmond Johnston, Senior Planner

Printed name

Humboldt County Planning & Building Department

For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 21, “Earlier Analyses,” may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addresses. Identify which effects from the above checklist were within the scope of and adequately analyze in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plan, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats, however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue identify:
 - a) The significant criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significant.

2. Introduction

This project-level Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared for the Cisco Farms, Inc. Cannabis Cultivation Project (Proposed Project) to satisfy the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). The County of Humboldt (County) is the lead agency for this Proposed Project under CEQA.

2.1. INITIAL STUDY PURPOSE

CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. An Initial Study is a public document used by the decision-making lead agency to determine whether a project may have a significant impact on the environment. If the agency finds that the Proposed Project may have a significant impact on the environment, but that these impacts will be reduced to a less-than-significant level through revisions to the project and/or implementation of specific mitigation measures, a Mitigated Negative Declaration shall be prepared.

This IS/MND is a public information document that describes the Proposed Project, existing environmental setting at the project site, and potential environmental impacts of construction and operation of the Proposed Project. It is intended to inform the public and decision-makers of the Proposed Project's potential environmental impacts and to document the lead agency's compliance with CEQA and the State CEQA Guidelines.

2.2. REVIEW PROCESS

This IS/MND is being circulated for public and agency review as required by CEQA. Because state agencies will act as responsible or trustee agencies, the County will circulate the IS/MND to the State Clearinghouse of the Governor's Office of Planning and Research for distribution and a 30-day review period.

During the review period, written comments may be submitted to:

Michael Holtermann
Planner
Planning and Building Department
County of Humboldt
3015 H Street
Eureka, CA 95501
mholtermann@co.humboldt.ca.us

3.Environmental Checklist

3.1.EXPLANATION OF INITIAL STUDY CHECKLIST

The California Environmental Quality Act (CEQA) Guidelines Appendix G recommends that lead agencies use an Initial Study (IS) checklist to determine the potential impacts of the Proposed Project on the physical environment. The checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by the Proposed Project. This section of the IS incorporates the Appendix G environmental checklist form, contained in the State CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 17 environmental topic areas. There are four possible answers to the checklist questions on the following pages. Each possible answer is explained below:

- A *Potentially Significant Impact* is appropriate if there is enough relevant information, as well as reasonable inferences from that information, that a fair argument can be made to support a conclusion that a substantial or potentially substantial adverse change may occur to any of the physical conditions within the area affected by the Proposed Project. When one or more of these entries are made, an Environmental Impact Report (EIR) is required.
- A *Less-than-Significant Impact with Mitigation Incorporated* is appropriate when the lead agency incorporates mitigation measures to reduce an impact from a potentially significant level to a less-than-significant level. For example, floodwater impacts could be reduced from a potentially significant level to a less-than-significant level by relocating a building to an area outside the floodway. The lead agency must describe the mitigation measures and briefly explain how the measures would reduce the impact to a less-than-significant level.
- A *Less-than-Significant Impact* is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant or the application of development policies and standards to the Proposed Project would reduce the impact(s) to a less-than-significant level. For example, the application of the City’s stormwater improvement standards would reduce potential erosion impacts to a less-than-significant level.
- A *No Impact* is appropriate where it can be demonstrated that the impact does not have the potential to adversely affect the environment. For example, a proposed in the center of an urbanized area with no agricultural lands on or adjacent to the project area clearly would not have an adverse effect on agricultural resources or operations.

All answers must take into account the whole action involved, including potential off- and on-site, indirect, direct, construction, and operation, except as provided for under State CEQA Guidelines Section 15183 and State CEQA Statute Section 21083. The setting discussion under each resource section in this chapter is followed by a discussion of impacts and applicable mitigation measures.

3.2. CHECKLIST, DISCUSSION OF CHECKLIST RESPONSES, AND PROPOSED MITIGATION

3.2.1. AESTHETICS

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

Setting

The Proposed Project site (APNs 105-101-011, 104-232-005, 104-191-001) is an approximately 517-acre parcel located off Chambers Road near the community of Petrolia. The subject parcel is currently developed for domestic and agricultural purposes. Existing onsite structures include a residence and four (4) agricultural barns. The property has historically been used for agricultural purposes. Numerous other cannabis cultivation sites are located in the vicinity of the Proposed Project.

No specific scenic vistas in the Proposed Project area have been designated. Humboldt County has no officially designated State Scenic Highways, though it has numerous segments eligible for designation due to their scenic qualities (CalTrans State Scenic Highway System Map, 2021):

- State Highway 101 in its entirety in Humboldt County
- State Highway 36 from State Highway 101 near Fortuna to the Trinity County Line
- State Route 254 in Avenue of the Giants
- State Route 299 from Arcata to Willow Creek
- State Route 96 from State Route 299 at Willow Creek north to Siskiyou County

The Commercial Cannabis Land Use Ordinance (CCLUO) includes Performance Standards for Light Pollution Control, including the requirement for all mixed-light cultivation and nurseries to be shielded so that no light escapes between sunset and sunrise (CCLUO, 2018). The Proposed Project has been designed to meet all CCLUO Performance Standards.

Analysis

- a) **Finding:** The project will not have a substantial adverse effect on a scenic vista. *Less than significant impact.*

Discussion: There are no officially designated scenic vista points in the Proposed Project area. No routes or highways eligible for designation are near the Proposed Project site, and no Wild, Scenic, and Recreational Rivers are designated near the Proposed Project site (Humboldt County General Plan, 2017).

Existing trees and vegetation would mostly block views of the Proposed Project site from Chambers Road, a public road (Appendix 1 – Site Maps). Proposed developments on the Proposed Project site may be visible from nearby private residences. Construction of the proposed facilities would be temporary and occur during daylight hours when surrounding neighbors are accustomed to the use of construction equipment. The Proposed Project is an agricultural project, consistent with the zoning and land use designation of the parcel. Other existing commercial cannabis operations are also located in the vicinity. All artificial light in the greenhouses would be shielded with blackout covers to avoid night-time light leakage. As such the Proposed Project would not be widely visible and would not have a substantial adverse effect on a scenic vista. Therefore, the impact is less than significant.

- b) **Finding:** The project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. *No impact.*

Discussion: The Proposed Project is located off of Chambers Road in Petrolia, located over 40 driving miles from State Highway 101, which is eligible to be designated as a California State Scenic Highway (California Department of Transportation, 2021). The Proposed Project site is not visible from a state scenic highway; therefore, no impacts would occur.

- c) **Finding:** The project will not substantially degrade the existing visual character or quality of the site and its surroundings. *Less than significant impact.*

Discussion: Sensitive viewer groups typically include residents and recreationists. The existing visual character of the Proposed Project site consists of an existing residence, four barns, a shipping container, livestock sheds, water diversion and storage infrastructure, open agricultural fields, and stands of trees and shrubs. The Proposed Project site is surrounded by agriculture, grasslands, woodlands, cannabis commercial operations, and agricultural operations.

During the Proposed Project's temporary construction periods, construction equipment, supplies, and construction activities would be visible on the subject property from immediately surrounding areas and rural

residences. Construction activities are a common occurrence in the region and are not considered to substantially degrade the area's visual quality. All construction equipment would be removed from the project site following completion of the construction activities. As such, the temporary visibility of construction equipment and activities at the Proposed Project site would not substantially degrade the visual character of the surrounding area.

Development of the site for the Proposed Project would alter the site's visual character by adding greenhouses, a pond, buildings, sheds, and other cultivation-related infrastructure (Appendix 1 - Site Maps). The Proposed Project is set to occur in the existing field on the property; no trees or vegetation are proposed to be removed from the cannabis operation. The Proposed Project is consistent with the agriculture commercial nature of the immediately surrounding areas and is consistent with nearby commercial cannabis activities.

Because the Proposed Project site has limited visibility from public access points and agricultural/cannabis activities are typical uses in the Proposed Project area, the Proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings, therefore, the impact is less than significant.

- d) **Finding:** The project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. *Less than significant impact.*

Discussion: The full-sun outdoor cultivation would be grown utilizing sunlight only, and the light-deprivation cultivation would be cultivated within greenhouses using light-deprivation techniques without the use of any artificial light in the canopy area. New sources of light associated with the Proposed Project include the mixed-light gutter connected greenhouses (ML-1), the commercial nursery (CN-1, CN-2, and CN-3), the commercial processing building, farmworker housing, and associated security and safety lighting.

Per the Cultivation and Operations Plan (Appendix 1), all lighting associated with the Proposed Project would be shielded so as not to allow light to escape from sunrise to sunset. Automated blackout covers would be installed on the mixed-light gutter connected greenhouses (ML-1) and the nursery greenhouses (CN-1, CN-2, and CN-3) to assure that light would not disturb wildlife or neighboring parcels. The covers would be deployed on greenhouses with supplemental lighting one half hour before sunset and after sunrise. If automated blackout covers were to malfunction, employees would manually cover the greenhouse to ensure light does not escape. The proposed processing building and farmworker housing would include blinds. These project features were designed to meet International Dark Sky Association Standards and follow the Performance Standards of the CCLUO.

All new outdoor lighting (e.g., security lighting) would be the minimum lumens required for security and safety purposes, directed downward, and shielded to prevent lighting spillover. All lighting would be designed and located so that it is confined to the property and that there is no spillover on to adjacent properties.

The new structures proposed would not be constructed of materials that would reflect light or cause any sources of glare that would impact surrounding land uses, or drivers on adjacent roadways. All new lighting on the property would conform with the CCLUO and with International Dark Sky Association Standards. Therefore, the Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and impacts would be less than significant.

Mitigation Measures

None.

3.2.2. AGRICULTURE AND FORESTRY RESOURCES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The Proposed Project site is located at 1414 Chambers Road (APNs 105-101-011, 104-232-005, 104-191-001) approximately 1-mile east of the community of Petrolia. The parcel is approximately 517 acres in size and is zoned Agriculture Exclusive (AE), with a land use designation of Agricultural Grazing (AG). The property is currently used for residential and agricultural purposes, including livestock grazing.

The subject property is part of a preserve under a Williamson Act Land Conservation Contract (“Walker Preserve” Ranch Nos. 79-6 and 84-20). The “Walker Preserve” consists of 1,034 acres across APNs 104-191-001, 104-221-017, 104-222-017, 104-232-003, 104-232-004, 104-232-005, and 105-101-001. The subject property has been under contract since 1979 and has continually been used for agricultural operations. Today, between 40 and 120 cattle are grazing onsite at any given time (Appendix 2 - Williamson Act Letter to County, 2022)

The Farmland Mapping and Monitoring Program of the California Department of Conservation has not yet mapped farmland in Humboldt County (<http://www.conservation.ca.gov/dlrp/fmmp>, April 2022). As illustrated in Figure 2, the property contains 120.25 acres of prime agricultural soils (Humboldt Web GIS, 2022).

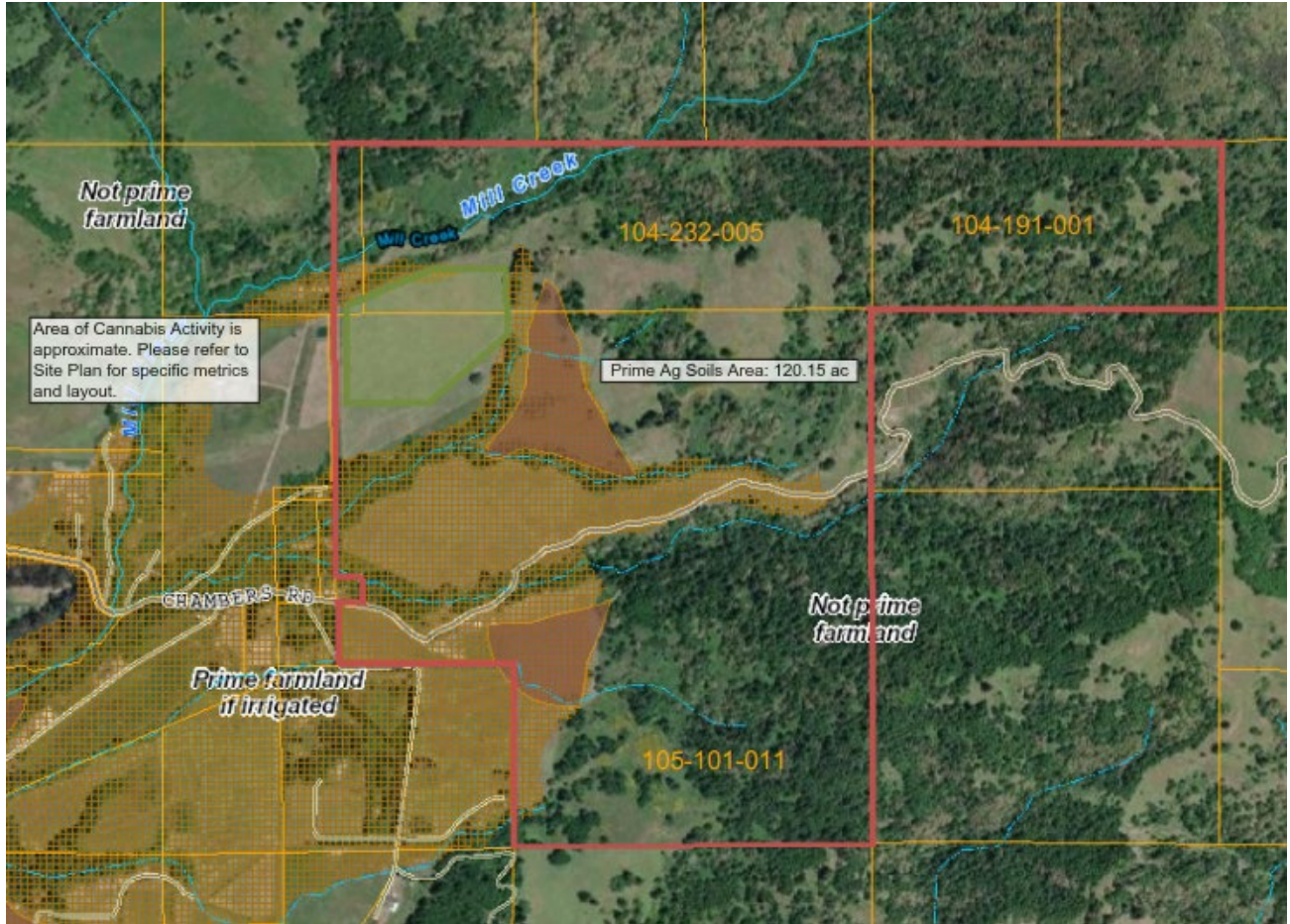


Figure 2: Prime Agricultural Soils (gold cross hatched and light brown shaded areas) located on the Project Site (Source: Humboldt Web GIS, 2022). Proposed Project area is outlined in green.

Analysis

- a) **Finding:** The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. *No Impact.*

Discussion: Humboldt County is not included in the Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation, 2018). The property does not contain Unique Farmland or Farmland of Statewide Importance. The property contains approximately 120 acres of mapped Prime Agricultural Soils, as defined under the CCLUO (Figure 2). The Prime Agricultural Soils are centrally located in the flatter portions of the property but do not overlap with the Proposed Project development area.

None of the Proposed Project would occur on Prime Agricultural Soils, Unique Farmland, or Farmland of Statewide Importance. Additionally, the Proposed Project is an agricultural project consistent with Agriculture Exclusive (AE) zoning. Therefore, the Proposed Project would not convert prime or unique farmland or farmland of statewide importance to a non-agricultural use. No impact would occur, and no mitigation would be necessary.

- b) **Finding:** The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. *Less than Significant Impact.*

Discussion: The subject property is under an existing Williamson Act Contract, and currently supports cattle grazing year-round. The applicant intends to continue cattle grazing. The Proposed Project would be located on APNs 105-101-011, 104-232-005, and 104-101-001, and would occupy a total area of approximately 22 acres, including all cannabis-related areas, ancillary buildings, roads and parking areas, employee housing, and water storage infrastructure. The Proposed Project comprises approximately 4% of lot acreage and 2% of the total Walker Preserve acreage. The remaining 98% of preserve acreage would remain available for grazing operations.

The Proposed Project site areas proposed for development are zoned Agricultural Exclusive (AE) and designated Agricultural Grazing (AG) and the proposed agricultural project is consistent with the intended zoning and general plan designation. Therefore, the Proposed Project would not conflict with existing zoning for an agricultural use or a Williamson Act contract and the impact would be less than significant.

- c) Finding: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526). *No impact.*

Discussion: The Proposed Project would not conflict with existing forestland or timberland zoning because no development is proposed to occur within the forested areas of the property. The property is zoned Agriculture Exclusive (AE); no timberland-related zoning exists onsite. All project components are proposed to occur within the areas of existing agriculture on the property zoned Agricultural Exclusive. No trees are proposed to be removed. Therefore, the Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland, and no impact would occur.

- d) Finding: The project will not result in the loss of forest land or conversion of forest land to non-forest use. *No impact.*

Discussion: The Proposed Project components would take place within the agriculturally zoned areas in existing agricultural fields. No development would occur within the forested areas of the property and no trees are proposed to be removed as part of the Proposed Project. Therefore, the Proposed Project would not result in the loss of forestland or conversion of forest land to non-forest use and no impact would occur.

- e) Finding: The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. *No Impact.*

Discussion: The Proposed Project would not produce significant growth inducing or cumulative impacts that would result in the conversion of farmland or forest land. The Proposed Project includes cannabis cultivation, which is an agriculture product, therefore protecting farmland from conversion. Growth inducing impacts are generally caused by projects that have a direct or indirect effect on economic growth, population growth, or land development. The Proposed Project would employ twelve (12) full-time, year-round employees. An additional 22 persons or contract laborers will be hired during peak seasonal events, such as harvesting and processing (Appendix 1 – Cultivation and Operations Plan). Additionally, no trees are proposed to be removed as part of the Proposed Project.

Therefore, the Proposed Project is not anticipated to indirectly convert farmland to non-agricultural land or forest land to non-forest land. *No Impact.*

Mitigation Measures

None.

3.2.3. AIR QUALITY

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project site is located off of Chambers Road near the community of Petrolia in Humboldt County, which lies within the North Coast Air Basin (NCAB). The NCAB extends for 250 miles from Sonoma County in the south to the Oregon border. The climate of NCAB is influenced by two major topographic units: the Klamath Mountains and the Coast Range provinces. The climate is moderate with the predominant weather factor being moist air masses from the ocean. Annual average precipitation is approximately 48 inches per year (USGS StreamStats, 2021). Dominant winds in the NCAB exhibit seasonal patterns. In the coastal areas strong north to northwesterly winds are common in the summer and from the southwest during storm events occurring during winter months.

Proposed Project activities are subject to the authority of the North Coast Unified Air Quality Management District (NCUAQMD) and the California Air Resources Board (CARB). The NCUAQMD is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards except for the state 24-hour particulate (PM₁₀) standard, which relates to concentrations of suspended airborne particles that are 10 micrometers or less in size.

In determining whether a project has significant air quality impacts on the environment, agencies often apply their local air district's thresholds of significance to projects in the review process. The District has not formally adopted specific significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emissions rates for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110

– New Source Review (NSR) and Prevention of Significant Deterioration (PSD), Section 5.1 – BACT (pages 8-9) (www.ncuaqmd.org).

The Proposed Project site is located near rural residential and agricultural uses, including other cannabis activities. Sensitive receptors near the Proposed Project site primarily include rural residences to the west, southwest, and east of the Proposed Project. Based on review of 2019 aerial imagery and Humboldt County Planning Department database (Accela, 2022), 27 off-site residences and twelve (12) active commercial cannabis operations are located within 1 mile of the Proposed Project area (Figure 3, Figure 4). Two of these residences and two of the commercial cannabis operations are associated with the Proposed Project. The nearest residence (located on APN 104-232-008) to the proposed cultivation activities (CN-1) is approximately 587 feet (Appendix 1 – Project Description). Mattole Unified School District, the nearest school, and the Mattole Valley Community Center are both located approximately 1 mile west of the Proposed Project area boundary (per Google Earth).

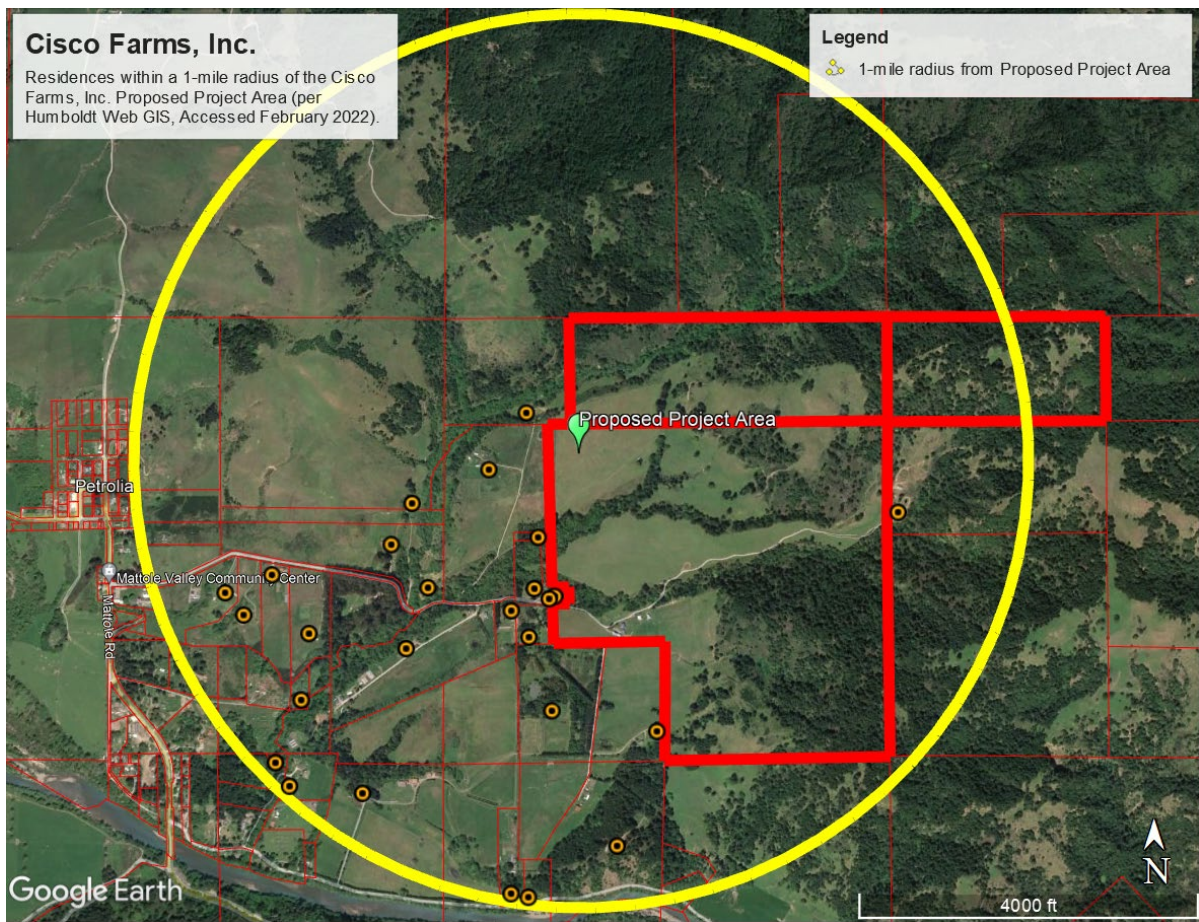


Figure 3: Residences within 1 mile of the Proposed Project Area - Residences indicated by orange circles (Source: Google Earth, 2019 Imagery)

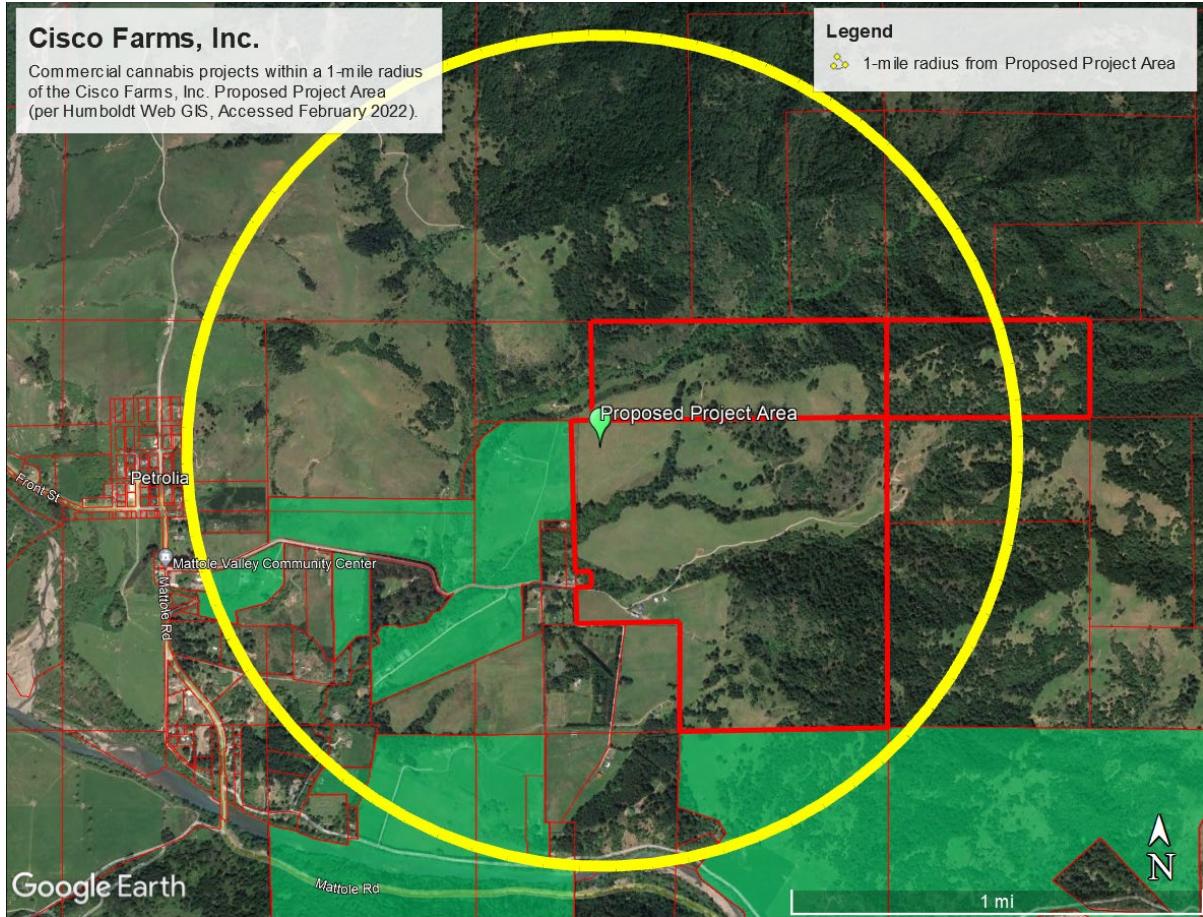


Figure 4: Active Commercial Cannabis projects within 1 mile of the Proposed Project Area (Source: Humboldt County Accela, 2022 & Google Earth, 2019 Imagery)

Analysis

- a) **Finding:** The project would not conflict with or obstruct implementation of the applicable air quality plan. *Less than significant impact with mitigation incorporated.*

Discussion: This impact is related to consistency with the applicable air quality management or attainment plan. A potentially significant impact to air quality would occur if the Proposed Project would conflict with or obstruct the implementation of the applicable air quality management or attainment plan. Although the Proposed Project would represent an incremental increase in air emissions within the district, of primary concern is that Proposed Project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the Proposed Project’s consistency with the applicable district air quality management or attainment plan(s).

Air quality in Del Norte, Humboldt, and Trinity counties is regulated by the NCUAQMD. The NCUAQMD’s primary responsibility is to achieve and maintain federal and state air quality standards, subject to the powers and duties of the CARB. The NCUAQMD is currently listed as being in “attainment” or is “unclassified” for all federal health protective standards for air pollution (ambient air quality standards). However, under State ambient air quality standards, the air district has been designated “nonattainment” for particulate matter less than ten microns in size (PM₁₀). PM₁₀ emissions include, but are not limited to, smoke from wood stoves, dust

from traffic on unpaved roads, vehicular exhaust emissions, and airborne salts and other particulate matter naturally generated by ocean surf.

The California Clean Air Act (CCAA) requires the NCUAQMD achieve and maintain State ambient air quality standards for PM₁₀ by the earliest practicable date. The NCUAQMD prepared the Particulate Matter Attainment Plan, Draft Report, in May 1995 (Attainment Plan). This report includes a description of the planning area (North Coast Unified Air Quality District), an emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD's attainment plan established countywide goals to reduce PM₁₀ emissions and eliminate the number of days in which standards are exceeded. The plan does not include project specific related requirements. However, NCUAQMD Rule 104, Section D – Fugitive Dust Emissions is used to address non-attainment for PM₁₀ by prohibiting specific activities and providing reasonable precautions to prevent particulate matter from becoming airborne. Under Rule 104, Section D “no person shall allow handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne.” Rule 104, Section D provides the following reasonable precautions that shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:

- a. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
- b. The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
- c. The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
- d. The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

Additionally, according to the Humboldt County General Plan, unpaved road dust accounts for approximately 58.2% of the County's PM₁₀ emissions (2017). To comply with the General Plan and NCUAQMD Rule 104, Section D – Fugitive dust Emissions, the Proposed Project design incorporates relevant control measures identified in the PM₁₀ Attainment Plan appropriate to incorporate into construction and operational activities. These measures are included as **Mitigation Measures AQ-1**. Therefore, the Proposed Project would not conflict with or obstruct implementation of the NCUAQMD Attainment plan for PM₁₀ and the impacts would be less than significant with mitigation incorporated.

- b) **Finding:** The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. *Less than significant impact with mitigation incorporated.*

Discussion: The NCUAQMD is currently listed as being in “attainment” or is “unclassified” for all federal health protective standards for air pollution (ambient air quality standards). However, under State ambient air quality standards, the air district has been designated “nonattainment” for PM₁₀ (NCUAQMD website, 2021).

The Proposed Project would generate short term PM₁₀ emissions from construction and operational activities.

Construction: During construction, scraping, grading, tilling, excavating, building construction, landscaping, and vehicle traffic could generate emissions. The NCUAQMD has advised that, generally, an activity that individually complies with the state and local standards for air quality emissions would not result in a cumulatively considerable increase in the countywide PM₁₀ air quality violation. Potential particulate matter could be generated during construction activities and build-out of the site, in general; however, short-term construction activities that use standard quantities and types of construction equipment

are not required to be quantified and are assumed to have a less than significant impact. In addition, the Proposed Project design incorporates control measures identified in the PM₁₀ appropriate to this type of project to reduce fugitive emissions. These measures are included in **Mitigation Measure AQ-1**.

The NCUAQMD and the County have not adopted thresholds of significance for construction generated PM₁₀. However, the Bay Area Quality Management District (BAAQMD) has established thresholds that can be used in for significance determination. The BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant. BAAQMD recommends a specific set of Basic Construction Measures to reduce emissions of construction generated PM₁₀ to less than significant. The BAAQMD Basic Construction Measures are consistent with NCUAQMD Rule 104, Section D, provide supplemental additional measures to control fugitive dust, and have been incorporated into **Mitigation Measure AQ-1**. Therefore, with incorporation of **Mitigation Measure AQ-1**, the construction related Proposed Project impacts would be less than significant

The NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its stationary source significance thresholds which are provided in (Table 7). If the Proposed Project’s construction emissions are below these thresholds, the Proposed Project’s impacts are considered to be less than significant.

The California Emission Estimator Model (CalEEMod®) Version 2020.4.0 was used to estimate emissions from Proposed Project related construction activities (Appendix 2 – CalEEMod Analysis for Cisco Farms, Inc., NorthPoint Consulting, April 2021). There are no specific default values for agricultural operations, so the most fitting Land Use Types from CalEEMod were used. Approximately 285,560 sq. ft. of “Industrial – Unrefrigerated Warehouse- No Rail” was used to calculate emissions related to the cultivation and nursery activities, 22,200 sq. ft. of “Industrial-General Light Industry” was used to calculate emissions related to the processing and drying activities, and 1,284 sq. ft. of “Residential – Mobile Home Park” was used to calculate emissions related to the modular farmworker housing. All other non-default CalEEMod values were sourced from the Cultivation and Operations Plan (Appendix 1 - Cenci Consulting, 2021) or were determined using the best available information. The estimated emissions along with the NCUAQMD significance thresholds are summarized in Table 7. As shown in the table, all construction-related emissions are less than the significance thresholds; thus, the Proposed Project’s construction emissions are considered to have a less than significant impact.

Table 7: Construction Pollutant Emissions (Source: CalEEMod, 2022 - Appendix 2)

Pollutant	Proposed Project Emissions - Unmitigated		Significance Thresholds		Exceeds Threshold?
	Tons/year	Lbs./day	Tons/year	Lbs./day	
ROG	0.11	0.69	40	50	No
NO _x	1.04	6.26	40	50	No
CO	1.03	6.22	100	500	No
SO _x	0.002	0.01	40	80	No
PM ₁₀	0.97	5.86	15	80	No
PM _{2.5}	0.18	1.1	10	50	No

Operation: During operation of the Proposed Project, the primary activities that would generate pollutant emissions would be daily vehicle traffic, delivery truck traffic, and the potential use of a back-up fuel-

powered generator during power outages. Although the use of the generator would be infrequent, generator use was considered as part of the operational impact analysis. Since the Proposed Project would result in an increase in operational trips (employees and delivery trucks), operational analysis includes emissions from these mobile sources. Proposed Project operational emissions were estimated using CalEEMod. At full build-out the Proposed Project would result in an average of 8 daily trips by full-time employees and 44 trips by seasonal contract laborers during peak seasonal events. Approximately 36 truck trips would be expected per month (approximately 9 truck trips per week). A total of 60 vehicle trips per day were used as an estimate in CalEEMod. The estimated emissions along with the NCUAQMD significance thresholds are summarized in Table 8. As shown in the table, all operational-related emissions are less than the significance thresholds, even when combining construction pollutant emissions, although temporary, from Table 7. Thus, the Proposed Project’s operational emissions are considered to have a less than significant impact.

Table 8: Operational Pollutant Emissions (Source: CalEEMod Analysis, 2022 - Appendix 2)

Pollutant	Proposed Project Emissions - Unmitigated		Significance Thresholds		Exceeds Threshold?
	Tons/year	Lbs./day	Tons/year	Lbs./day	
ROG	1.27	7.65	40	50	No
NO _x	0.14	0.82	40	50	No
CO	0.56	3.38	100	500	No
SO _x	0.001	0.01	40	80	No
PM ₁₀	4.35	26.28	15	80	No
PM _{2.5}	0.45	2.72	10	50	No

Therefore, the Proposed Project impacts are less than significant with **Mitigation Measure AQ-1** incorporated.

- c) **Finding:** The project would not expose sensitive receptors to substantial pollutant concentrations. *Less than significant impact.*

Discussion: Sensitive receptors (e.g., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effect of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, parks, childcare centers, hospitals, convalescent homes, and retirement homes.

The nearest sensitive receptors near the Proposed Project site include rural residences to the south, west, and east. The nearest residence is located approximately 587 feet from the Proposed Project area. There are approximately 27 residences within a mile radius of the Proposed Project (Figure 3). The nearest school/park is Mattole Unified School District, located one mile west of the Proposed Project area (Google Maps, 2022). The Mattole Community Center is located across the street from the Mattole Unified School District campus, also approximately one mile west of the Proposed Project area (Google Maps, 2022). There are no hospitals, designated retirement communities, childcare centers, or other known sensitive receptors within 600 feet of the Proposed Project area.

As indicated by the air quality impact analysis under subsection b), the Proposed Project would not produce significant quantities of criteria pollutants (e.g., PM₁₀) during short-term construction activities or long-term operation.

As part of the proposed cultivation, pesticides and fertilizers would be applied to cannabis cultivation. Pesticide or fungicide application would occur within greenhouses and outside for the full sun outdoor cultivation. Chemicals would be applied directly to the plants; no aerial spraying would occur. Application is normally required to be administered a minimum of 300 feet from sensitive receptors (e.g. residences) in the case of dry pesticides and 200 feet in the case of wet pesticides. The Proposed Project area is greater than 500 feet from the nearest sensitive receptor (residence on APN 104-232-008). All other residences or sensitive receptors are located 600+ feet from the Proposed Project area. This operating restriction is an existing requirement of law and no additional mitigation is required. Therefore, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations and the impacts would be less than significant.

- d) **Finding:** The project would not result in emissions (such as those leading to odors adversely affecting a substantial number of people). *Less than significant impact.*

Discussion: During long-term operation of the Proposed Project there is the potential to impact air quality due to odors that would be generated by the proposed cultivation and processing activities. Odors from the Proposed Project cannabis cultivation activities would primarily be noticeable between August and October (Appendix 1 – Cultivation and Operations Plan).

The closest land uses to the Proposed Project site that could potentially be impacted by odors include surrounding residences. As described above, there are approximately 27 residences within one mile of the Proposed Project area, two of which are associated with the Proposed Project applicant (Figure 3). The approximately 25 other nearby residents could potentially experience odors from the Proposed Project cultivation activities. According to the 2020 Census, the average household size in Humboldt County was 2.41 (US Census Bureau, 2022). Based on this it is estimated that the nearby residential units would provide housing for approximately 60.25 persons, however, the vast majority of these residences are located greater than 600 feet from the Proposed Project area.

Although these nearby residents may experience odors from the facility, the low number of residents does not comprise a substantial number of people. Additionally, there are approximately twelve (12) other cultivation operations within 1 mile of the Proposed Project area (Figure 4), and another proposed commercial cannabis operation is consistent with surrounding land uses. The size of the parcel, topography, and distance to sensitive receptors would reduce any odors emitted from commercial cannabis activities. The Proposed Project site meets all siting criteria outlined in the CCLUO and is consistent with surrounding land uses. Therefore, no mitigation is necessary and Proposed Project impacts would be less than significant.

Mitigation Measures

AQ-1. During construction and operation, the following dust control measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, excavations, and unpaved access roads) shall be watered two times per day in areas of active construction.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All vehicle speeds on unpaved roads shall be limited to 15 mph, unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage shall be provided for construction workers at all access points.
- All construction and operation equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications.

3.2.4. BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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 the United States Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the United States Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on Federally protected wetlands (including, but not limited to, marshes, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological Resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The Proposed Project site (APNs 105-101-011, 104-232-005, 104-191-001) is an approximately 517-acre parcel located off Chambers Road near the community of Petrolia. The subject parcel is currently developed for domestic and agricultural purposes. Existing onsite structures include a residence and four (4) agricultural barns. The property has historically been used for agricultural purposes. The parcel is surrounded by agricultural land, timberland, rural residential homes, and other cannabis farms and agricultural activities.

The Proposed Project site is located approximately 1.40 air miles east of Petrolia. Elevations range from 225 feet to 860 feet above sea level (Google Earth Pro, 2022). Annual average precipitation is approximately 73.93 inches per year (PRISM, 2022). The Proposed Project site is located in the Lower Mattole River HUC-12 watershed, and contains several watercourses, including Mill Creek, a perennial (Class I) watercourse, two

seasonal (Class II) watercourses, and several ephemeral (Class III) drainages (Figure 5 and Appendix 1 – Site Maps).

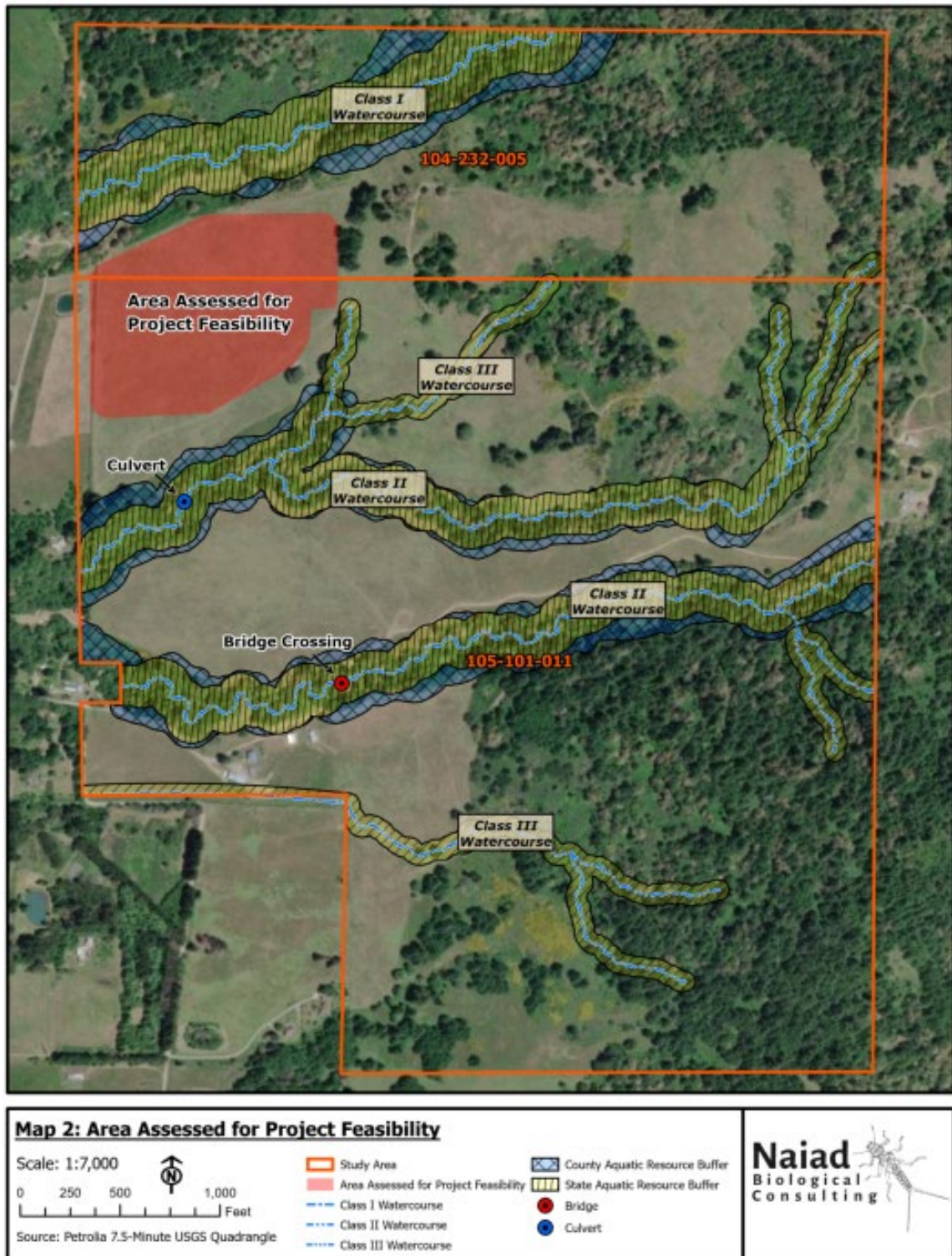


Figure 5: Site Map with Classified Watercourses (Source: Biological Report, Naiad Biological Consulting, 2021)

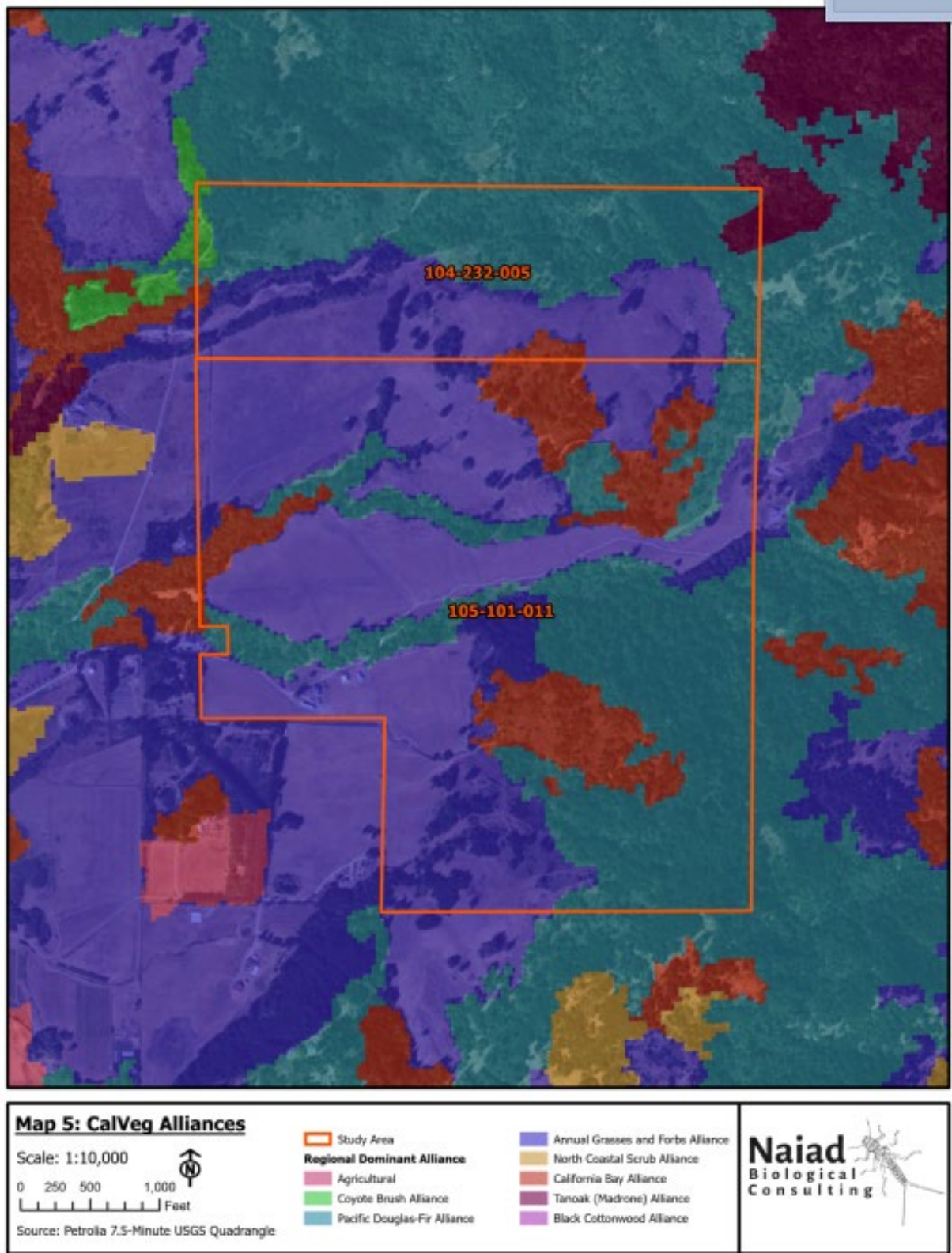


Figure 6: California Vegetative Alliances (Source: Botanical Report, Naiad Biological Consulting, 2021)

A Biological Reconnaissance and Project Feasibility Assessment Report (“Biological Report”) and a Botanical Report of Special Status Native Plant Populations and Natural Communities (“Botanical Report”) were prepared for the site by Naiad Biological Consulting in September 2021 (Appendix 2). The purpose of these reports was to provide information as to whether the Project site contains or potentially contains sensitive plants and wildlife species and jurisdictional wetlands. Based on the Biological Report, a Golden Eagle Survey Report was conducted (Appendix 2 – Naiad Biological Consulting, February 2022). An Invasive Species Control Plan was also prepared to manage non-native and invasive species on the parcel (Appendix 2 – Naiad Biological Consulting, October 2020).

Special-Status Plant Species: Sensitive Natural Communities and Rare Plants

Naiad Biological Consulting conducted a query of the CDFW’s California Natural Diversity Database (CNDDDB) and the California Native Plant Society (CNPS) database and collected information regarding the hydrologic, physiographic, habitat, and species-distribution of plant species. Two floristic field surveys were conducted on March 21st and June 21st of 2021, per the CDFW’s “Protocols for Surveying and Evaluating Impacts to Sensitive Status Native Plant Populations and Natural Communities” (2018). Surveys were timed to maximize the floristic periods of potential rare plants. The survey encompassed the Proposed Project area.

Of the queried species, 32 special-status plant species (31 vascular and 1 lichen) and two (2) special-status habitat communities had the potential to be located onsite. No rare plants (CRPR 1 or 2) or special-status vegetation communities were identified during the botanical survey of the Proposed Project area. California Vegetative Alliances are shown in Figure 6. Monterey cypress (*Hesperocyparis macrocarpa*), a CRPR of 1B.2 in its natural range, was observed during surveys but was classified as a planted ornamental. Regardless, the Monterey cypress would not be impacted by cultivation operations. The Proposed Project area was identified as an existing highly grazed agricultural field, typical of valley and foothill grasslands within the lower foothills of the Northern Coast Ranges. The Botanical Survey concluded that no listed species were observed during the survey, and no further botanical surveys were recommended (Appendix 2 – Naiad Biological Consulting, 2021).

Special-Status Fish and Wildlife

During preparation of the Biological Report, Naiad Biological Consulting conducted a query of relevant databases (including CDFW’s CNDDDB, CalFlora, and the USFWS website) to determine the special-status species with the potential to be located onsite. A field survey was conducted on July 3, 2020, to observe signs of wildlife, including tracks, scat, nests, habitats, etc., and determine the potential impact to these species from the Proposed Project.

A total of 26 special-status wildlife species were identified in the 6-quad CNDDDB database query of the 7.5’ USGS Petrolia quadrangle: 5 amphibians, 9 birds, 5 fishes, 1 insect, 5 mammals, 1 reptile. Of those, five (5) had moderate or high potential to occur in the Proposed Project area due to presence of habitat on the project parcel or vicinity of the parcel to known habitat. These five (5) species, which include two (2) mammal species, two (2) bird species, and one (1) invertebrate species, are discussed in detail below. No fish, amphibians, or reptiles were identified as having moderate or high potential to occur in the Proposed Project area. Unless otherwise referenced, species details are sourced from the Biological Report.

Mammals (2):

North American porcupine (*Erethizon dorsatum*) – North American porcupines are a CDFW species of special concern. They are commonly found in coniferous areas, shrublands, and grasslands. The Biological Report identified a “moderate” potential for the porcupine to utilize the Proposed Project area and adjacent areas.

American badger (*Taxidea taxus*) – The American badger is a CDFW species of special concern. Badgers are most abundant in shrub, forest, and herbaceous habitats near friable soils, and open, uncultivated ground. The Biological Report identified evidence of badger activity (burrows) within the Proposed Project area.

Birds (2):

Cooper’s Hawk (*Accipiter cooperii*) – Cooper’s hawks are protected by CDFW and are listed on the CDFW watch list. Cooper’s Hawks utilize dense stands of live oak, riparian deciduous habitat, or other forest habitats near water for foraging and nesting. The Biological Report identified a “moderate” potential of Cooper’s Hawks to fly over the Proposed Project area and a “moderate” potential to forage in adjacent areas.

Golden Eagle (*Aquila chrysaetos*) - Golden eagles are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. They are also fully protected by CDFW and are on CDFW’s watch list. Golden eagles typically use open habitats away from human environments and construct nests upon cliffs, trees, man-made structures, or the ground. The Proposed Project area was mapped by CDFW as being “Medium” predicted habitat for Golden Eagles, and the Biological Report identified a “moderate” potential of Golden Eagles to fly over the Proposed Project area, and a “moderate” potential to forage in adjacent areas.

Invertebrates (1):

Western bumble bee (*Bombus occidentalis*) - The western bumble bee is on the CDFW special animals list and occupies open grassy coastal prairies and Coast Range meadows. This long-tongued species may pollinate flowers with elongated corollas. The western bumble bee lives in abandoned burrows, and the Biological Report identified “moderate” potential for the species to occur onsite.

Wetlands and Waters

The final Biological Resource Assessment (Appendix 2 - Naiad Biological Consulting, 2021) investigated the site for potential wetland areas in the vicinity near Proposed Project activities. No potential wetland areas were discovered in the vicinity near the Proposed Project area, and no further wetland delineations or assessments were recommended (Appendix 2 – Naiad Biological Consulting, 2021).

A prior, initial Biological Reconnaissance and Project Feasibility Assessment Report was conducted in October 2020 by Naiad Consulting to review the property and assess potential appropriate project-related sites and identify environmental constraints. One potential wetland area, located approximately 400 feet east of the existing barn and residence, was identified onsite while investigating potential appropriate sites. The potential wetland area was not further evaluated or delineated in the final Biological Resource Assessment (2021), as the area is located over 1,700 feet from the Proposed Project area. No project components in the final Proposed Project are located near this potential wetland area.

As mentioned above, the property contains several watercourses, including Mill Creek, a perennial (Class I) watercourse, two seasonal (Class II) watercourses, and several ephemeral (Class III) drainages (Figure 5). The Biological Report included delineation of the edge of riparian habitat of all onsite streams such that proper setbacks as required in the Humboldt County Streamside Management Area Ordinance could be mapped for incorporation into the Proposed Project’s design parameters.

Analysis

- a) **Finding:** The project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. *Less than significant impact with mitigation incorporated.*

Discussion: As mentioned above, a Biological Reconnaissance and Project Feasibility Assessment Report (“Biological Report”) and a Botanical Report of Special Status Native Plant Populations and Natural Communities (“Botanical Report”) were prepared for the site by Naiad Biological Consulting in September 2021 (Appendix 2).

Special-Status Plant Species and Wetlands

No wetlands or potential wet areas were located in the Proposed Project area. No rare plants (CRPR 1 or 2) or special-status vegetation communities were identified during the botanical survey of the Proposed Project area. Monterey cypress (*Hesperocyparis macrocarpa*), a CRPR of 1B.2 in its natural range, was observed during surveys but was classified as a planted ornamental. Regardless, the Monterey cypress would not be impacted by cultivation operations. The Proposed Project area was identified as an existing highly grazed agricultural field, typical of valley and foothill grasslands within the lower foothills of the Northern Coast Ranges. The Botanical Survey concluded that no listed species were observed during the survey, and no further botanical surveys were recommended (Appendix 2 – Naiad Biological Consulting, 2021).

Special-status Wildlife

A total of five (5) special-status wildlife species were identified as having moderate or high potential to occur within the Proposed Project Area and/or be impacted by the Proposed Project:

Mammals

The Proposed Project area could provide habitat for two (2) mammals: the North American Porcupine and the American Badger. The North American porcupine could reside near the property and pass through the Proposed Project area while foraging, however, the Biological Report concluded that the lack of within the Proposed Project Area made it unlikely that the porcupine would utilize the open field habitat. Additionally, ample similar homogenous habitat exists throughout the parcel near the Proposed Project area. Therefore, the Proposed Project is unlikely to significantly impact this species.

The American Badger (*Taxidea taxus*) was the only rare species to be positively identified onsite. Evidence of burrows were observed within the pasture habitat of the Proposed Project area. The Biological Report concluded that there is ample habitat on the subject parcel for the badgers to utilize, and that disturbance of the Proposed Project area would leave sufficient habitat onsite for badgers. In addition, according to the Biological Report, badgers prey on pocket gophers, which are significantly higher in population in grazed meadows compared to ungrazed meadows. The Report suggested that, due to the ungrazed nature of the Proposed Project area, badgers may prefer the grazed meadows located nearby the Proposed Project area.

As evidence of badgers was observed onsite, the Biological Report included recommendations to prevent “take” of this species from construction and ground-disturbing impacts. The Report requires that the applicant should survey all areas to be disturbed prior to any construction. If any burrows are observed within the proposed disturbance area, pre-construction surveys should be completed by a qualified biologist as soon as possible. If burrows or dens are identified and deemed active, badger relocation should occur in coordination with the qualified biologist and CDFW. This recommendation to protect *Taxidea taxus* has been included as **Mitigation Measure BIO-1**.

Birds

The Proposed Project area has the potential to provide habitat for two (2) bird species: the Golden Eagle and the Cooper’s hawk. Construction and operation of the Proposed Project may have the potential to

disturb sensitive bird species by impacting nesting or foraging habitat during construction, or by ongoing noise and light pollution during operation. Additional bird surveys were recommended in the Biological Report, per CDFW protocol. Following this recommendation, two (2) ground-based eagle and raptor nest surveys and a Prey Availability Survey were completed in August of 2021 and February of 2022. The surveys were focused on Golden Eagles and Cooper's hawks but surveyed for all raptor species. Surveys followed the protocol outlined by the American Eagle Research Institute. No Golden Eagles, Cooper's hawks, or other raptor species were observed soaring or foraging during the surveys, and no evidence of historical or current nests were observed. Limited prey availability for Golden eagles was noted, suggesting that the Proposed Project area offered few sources of prey for Golden Eagles. The survey concluded that, based on the results of all three surveys, it would be unlikely for Golden Eagles or other raptors to be significantly impacted by the Proposed Project. The Golden Eagle Survey Report prepared by Naiad Biological Consulting in 2022 discusses the above in more detail (Appendix 2).

To prevent impacts to migratory birds in the future, should they choose to utilize habitat in or adjacent to the Proposed Project area, **Mitigation Measure BIO-2** has been incorporated to require preconstruction surveys if construction is to occur between February 1 and August 31.

Northern Spotted Owls were not identified as having potential to be impacted by the Proposed Project. The nearest Northern Spotted Owl Activity Center (HUM 0010) is located 1.55 miles south of the Proposed Project area. The Biological Report states that the area assessed for the Proposed Project does not have Northern Spotted Owl habitat preference due to the "size, structure, and species of the trees within the Study Area, and is therefore not likely utilized for nesting, roosting, or foraging/hunting by Northern Spotted Owls" (Appendix 2 – Naiad Biological Consulting, 2021, pg. 21). The Biological Report did find that there is moderate suitable habitat for Northern Spotted Owls in the area surrounding the Proposed Project, however, as long as the Proposed Project does not generate noise levels of 70 dB or greater and does not produce light pollution, no impacts to Northern Spotted Owls would be anticipated (Appendix 2 – Naiad Biological Consulting, 2021).

Invertebrates

The Proposed Project Area has the potential to support native pollinators, including the western bumblebee, which lives in abandoned burrows or cavities and has potential nesting habitat onsite. The Biological Report concluded that there was abundant suitable habitat on the Proposed Project parcel, and that the Proposed Project would not significantly impact this species due to abundant presence of similar homogenous habitat throughout the parcel.

The Project would include two (2) stream crossing upgrades that would improve water passage and ensure the functionality of culverts in preparation for the 100-year storm event. Culvert replacements have the potential to impact sensitive species, however, the applicant would follow all restrictions on Best Management Practices as denoted in the executed Streambed Alteration Agreement No. EPIMS-HUM-18009-R1C (Appendix 2). Per the Agreement, no work on stream crossing upgrades is permitted when water is in the stream. All construction is to occur when channels are dry. Therefore, stream crossing upgrades are not likely to impact sensitive fish species that may be located onsite.

Once the Proposed Project is completed and mixed-light greenhouses, processing facilities, etc. are operational, there exists the possibility that noise and light pollution may adversely effect, either directly or indirectly, wildlife species identified as a candidate, sensitive, or special status. The onsite backup generator would only be used for emergencies. The new structures proposed would not be constructed of materials that would reflect light or cause any sources of glare that would impact surrounding land uses, or drivers on adjacent roadways.

All new lighting on the property would conform with the CCLUO and with International Dark Sky Association Standards.

The Proposed Project would also not indirectly impact special-status plant or wildlife species through the increased spread of invasive species. In fact, implementation of the Proposed Project would reduce the presence of invasive species onsite through regular monitoring and mechanical removal. According to the Invasive Species Control Plan (Naiad Biological Consulting, October 2020 – Appendix 2), a site visit was conducted by a qualified botanist on July 3rd, 2020, to observe and record the presence of invasive species on the Proposed Project site. The Cal-IPC Inventory was used to determine invasive species of concern for the site. Seven (7) invasive species with a CAL-IPC Invasiveness Rank of “Moderate” or “High” were observed onsite: bull thistle (*Cirsium vulgare*), Himalaya blackberry (*Rubus armeniacus*), Italian thistle (*Carduus pycnocephalus*), sheep sorrel (*Rumex acetosella*), Scotch broom (*Cytisus scoparius*), hedgehog dogtail (*Cynosurus echinatus*), and pennyroyal (*Mentha pulegium*). All seven (7) invasive species are most effectively managed through mechanical and hand-pulling removal techniques. Implementation of the Proposed Project would reduce the presence of invasive species onsite through regular monitoring and mechanical removal of invasive species. Therefore, no indirect impact to special-status plants or wildlife is anticipated as a result of invasive species.

With incorporation of **Mitigation Measure BIO-1 and BIO-2**, adherence to the Performance Standards in the CCLUO, compliance with the SWRCB Cannabis General Order and Policy, and adherence to the recommendations in the Biological Report, the Proposed Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

- b) **Finding:** The project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. *Less than significant impact.*

Discussion: According to the Biological Report, no wetlands or wet areas were observed onsite. Riparian habitat exists along Mill Creek, a perennial stream north of the Proposed Project area, as well as along the two (2) intermittent Class II streams on the property and some ephemeral streams on the property. The Proposed Project has been specifically designed to maintain riparian setbacks and is set back at least 150 feet from perennial watercourses and at least 100 feet from intermittent watercourses. The edge of riparian habitat was mapped in the Biological Report, and all buffers exceed Streamside Management Area Ordinance setback requirements from edge of riparian habitat. Since, during construction, the Proposed Project would disturb more than one acre of the site, the Proposed Project would be subject to the requirements State Water Resources Control Board (SWRCB) Construction General Permit (CGP). The SWRCB CGP would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) which documents the stormwater dynamics at the site, the Best Management Practices (BMPs) and water quality protection measures that are used, and the frequency of inspections. BMPs are activities or measures determined to be practicable, acceptable to the public, and cost effective in preventing water pollution or reducing the amount of pollution generated by non-point sources. Implementation of the SWPPP would ensure that the riparian habitat along Mill Creek and the intermittent watercourse closest to the Proposed Project area are protected during construction activities and long-term operation of the Proposed Project.

Once the proposed site is operational, the existing Site Management Plan (SMP) would be updated in accordance with SWRCB Cannabis General Order 2019-0001-DWQ. The updated SMP would detail operational Best Practicable Treatment or Control (BPTC) Measures which would be installed and adhered to for the duration of the Proposed Project, such as revegetating any bare or exposed soils, ensuring secondary containment and proper storage of all liquid products (including liquid fertilizers, pesticides, amendments, and

petroleum products), and proper storage and disposal of waste materials (including organic plant matter and refuse). Such actions would reduce the potential for any materials from the Proposed Project to become pollutants. To further prevent runoff to riparian areas, water conservation and containment measures would be implemented including the use of hand irrigation or drip irrigation with sensors to prevent excessive water use, and the maintenance of a stable, vegetated buffer between the cultivation area and the riparian zone.

With the implementation operating restrictions provided in this document, and compliance with SWQCB Construction General Order and Cannabis General Order, and the County's grading regulations, potential impacts to sensitive communities would be less than significant.

- c) Finding: The project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. *Less than significant impact.*

Discussion: As described above, no wetlands or wet areas as defined by Section 404 of the Clean Water Act were identified onsite. All Proposed Project development is sited outside of all minimum setbacks from streams as required by the SWRCB and Humboldt County.

Construction of the Proposed Project would occur during the dry months when it is not raining and appropriate BMPs would be installed. All construction materials, including gravel and soils would be covered and fiber rolls would be installed around the perimeter of all construction areas to ensure no sediment discharges into Waters of the US. Spoils piles would be covered, and fiber rolls would be installed around the perimeter of construction areas to ensure no sediment discharges into Waters of the United States (US) or Waters of the State.

Once the Proposed Project is operational, a SMP would be created in accordance with SWRCB Cannabis General Order 2019-0001. The SMP would detail operational Best Practicable Treatment or Control (BPTC) Measures which would be installed and adhered to for the duration of the Proposed Project, such as revegetating any bare or exposed soils, ensuring secondary containment and proper storage of all liquid products (including liquid fertilizers, pesticides, amendments, and petroleum products), and proper storage and disposal of waste materials (including organic plant matter and refuse). Such actions would reduce the potential for any materials from the Proposed Project to become pollutants. To further prevent runoff to riparian areas, water conservation and containment measures would be implemented including the use of hand irrigation or drip irrigation with sensors to prevent excessive water use, and the maintenance of a vegetated buffer between the cultivation area and the riparian zone.

Therefore, the Proposed Project as proposed and in compliance with regulatory requirements, would not have a substantial adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Impacts would be less than significant.

- d) Finding: The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. *Less than significant impact with mitigation incorporated.*

Discussion: Wildlife movement corridors are areas that connect suitable wildlife habitat areas in an otherwise fragmented region. The site is in a rural area of Humboldt County and is currently used for residential and livestock uses, and is surrounded by residential, agricultural, livestock, and timber uses. The area in which the greenhouses and accessory facilities would be located do not contain habitats unique to the area such that the removal of the habitat would preclude wildlife from moving through the site. As discussed above, the site has been designed to meet minimum setback requirements and no work would be done directly within the riparian

areas; therefore, the Proposed Project would not directly interfere with movement of fish and other aquatic species.

Mitigation measures would be implemented during construction to reduce potential impacts, as discussed above, to migratory wildlife, including migratory birds. Therefore, the Proposed Project would not 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. Impacts are less than significant with implementation of **Mitigation Measures BIO-2**.

- e) **Finding:** The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. *Less than significant impact.*

Discussion: The Proposed Project would not involve the removal of any trees. In addition to the general biological resources policies in the County General Plan, the County maintains Streamside Management Areas (SMAs) to protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and other conditions detrimental to water quality. All SMA buffers would be exceeded and no trees are proposed to be removed. Therefore, the Proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and the impact would be less than significant.

- f) **Finding:** The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. *No impact.*

Discussion: According to the U.S. Fish & Wildlife Service Environmental Conservation Online System (ECOS), the Proposed Project site is not located within the boundaries of a Habitat Conservation Plan. Habitat Conservation Plans (HCP) in Humboldt County include the following: 1) Green Diamond Resource Company California Timberlands & Northern Spotted Owl (formerly Simpson Timber Company); 2) Humboldt Redwood Company (formerly Pacific Lumber, Headwaters); 3) Regli Estates; and 4) Humboldt Bay Municipal Water District Habitat Conservation Plan. These Habitat Conservation Plans primarily apply to forest lands in the County. According to the CDFW website, the Proposed Project site is not located in the boundaries of a Natural Community Conservation Plan (CDFW, 2019). The conservation plans for Humboldt County, listed on California Regional Conservation Plans Map on the CDFW website, include the Green Diamond and Humboldt Redwoods Company (previously Pacific Lumber Company) Habitat Conservation Plans.

In addition, the Proposed Project is located on private property and would continue to use the land for agricultural purposes. No trees would be removed as a result of the Proposed Project. Therefore, the Proposed Project would not conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

Mitigation Measures

BIO-1. Preconstruction surveys for American badgers (*Taxidea taxus*) shall be conducted prior to any ground disturbance or construction in the Proposed Project area. Surveys shall be conducted by a qualified biologist no more than one week prior to ground disturbance. If active badger dens are determined to be present, badger relocation to other onsite suitable habitat shall occur in coordination with CDFW.

BIO-2. For all construction-related activities that take place within the nesting season, accepted as February 1 through August 31, a preconstruction nesting-bird survey for migratory birds, including Cooper's hawk (*Accipiter cooperii*) and Golden eagle (*Accipitridae chrysaetos*), shall be conducted by a qualified biologist no more than two weeks prior to construction within the Proposed Project area and a buffer zone determined by the qualified biologist, depending on the species nesting. The timing of surveys shall be determined in

coordination with the CDFW. If active nests are found, a no-disturbance buffer zone shall be established, the size of which the biologist shall determine based on nest location and species. Within this buffer zone, no construction shall take place until the young have fledged or until the biologist determines that the nest is no longer active.

3.2.5. CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project site (APNs 105-101-011, 104-232-005, 104-191-001) is an approximately 517-acre parcel located off Chambers Road approximately 1.40 air miles east of Petrolia. The subject parcel is currently developed for domestic and agricultural purposes. Existing onsite structures include a residence and four (4) agricultural barns. The property has historically been used for agricultural purposes. The parcel is surrounded by agricultural land, timberland, rural residential homes, and other cannabis farms and agricultural activities. The project site was traditionally occupied by the Mattole (or Bettol) Tribe, also known as the “Kuneste” (Appendix 2 – William Rich and Associates, 2021).

The Native American Heritage Commission (NAHC) was contacted on August 4, 2021 to request a tribal consultation list. A response was received dated September 1, 2021, which included a consultation list of tribes traditionally and culturally affiliated with the geographic area of the Proposed Project. On September 7, 2021, consultation requests were sent to all Native American groups included in the consultation list of tribes received from the NAHC. A response from the Tribal Historic Preservation Officer (THPO) of Blue Lake Rancheria was received via email on September 12, 2021, which indicated that the project is outside the area of concern for cultural resources mapped for Blue Lake Rancheria. Blue Lake Rancheria had no comments and declined AB 52 Consultation. No additional responses to requests for consultation were received within the 30-day response window.

A Cultural Resources Investigation Report was prepared for the property by William Rich, M.A., of William Rich and Associates in May 2021 (Appendix 2). The purpose of the investigation was to document whether cultural resources were present within the Proposed Project area, and whether any present cultural resources would be considered “Tribal Cultural Resources” or “historic resource” under CEQA. The report included data queries from the National Register of Historic Places (NRHP), Determinations of Eligibility for the NRHP, the California Register of Historical Places, and the California listing of Historical Landmarks.

The Cultural Resources Investigation Report included an examination of archaeological site records and survey reports in the area as identified by the Northwest Information Center (NWIC). No previous surveys in the vicinity have included the Proposed Project area. Four other surveys have included small areas within APNs

104-232-005 and 105-101-011 (S-039935, S-041906, S-041907, and S-043365), none of which found resources within the subject parcels or within ¼ mile. One resource, Langdon’s Old Mill Berm (P-12-003796) is located ¼ mile west of the subject parcels.

During report preparation, the Bear River Band of Rohnerville Rancheria and the InterTribal Sinkiyone Wilderness Council were contacted. No responses had been received as of May 2021. The Cultural Resources Investigation Report also included a field survey which encompassed all of the Proposed Project area. The field surveys occurred on April 1 and September 21, 2020. The Proposed Project area was investigated for the presence of archaeological deposits, historic features, or other cultural resources. The report concluded that no historical resources, as defined in CEQA, Article 4, Section 15064.5 (a), were identified within the Proposed Project area or within a 600-foot buffer from the Proposed Project area (William Rich and Associates, 2021).

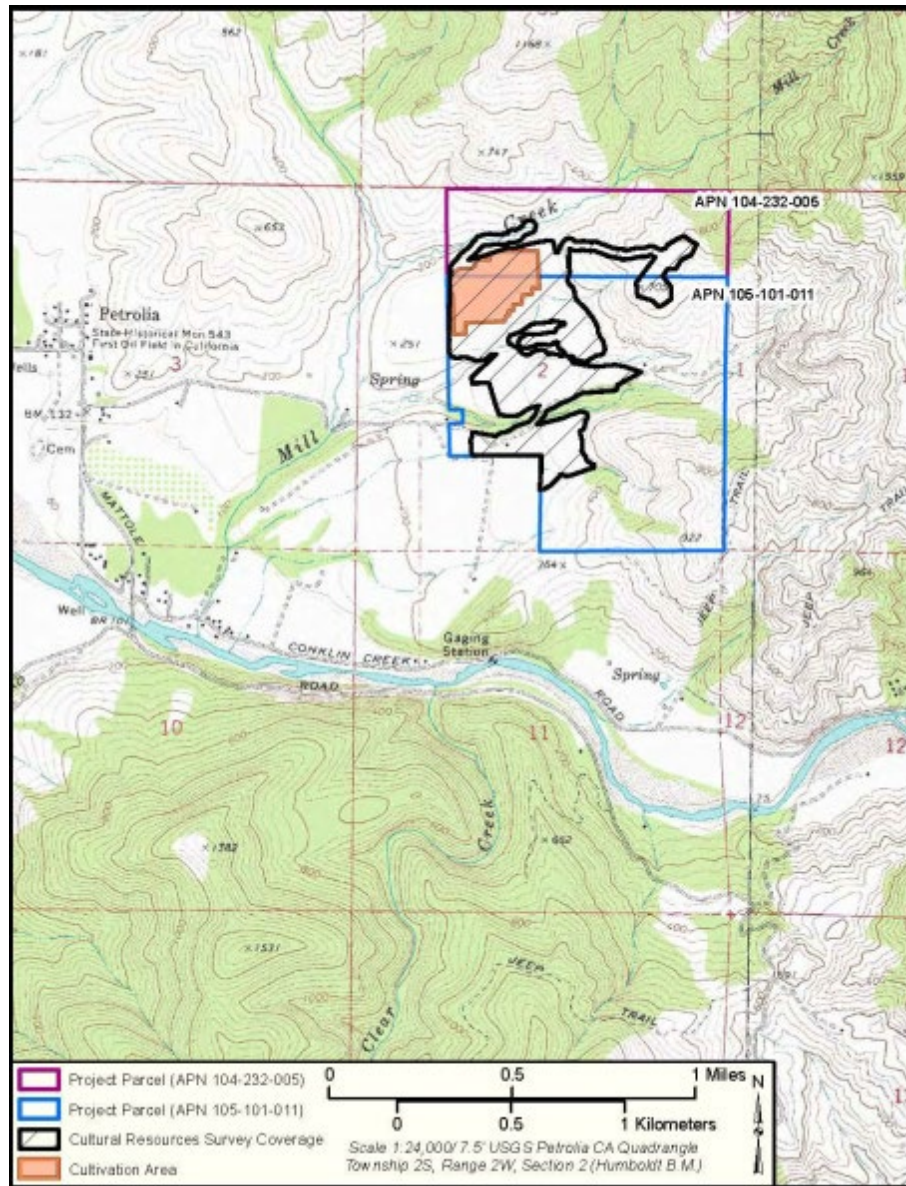


Figure 7: Cultural Resources Survey Coverage Map (Source: Appendix 2 - William Rich and Associates, 2021)

Analysis

- a) **Finding:** The project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. *Less than significant with mitigation incorporated.*

Discussion: The Cultural Resources Investigation Report completed by William Rich and Associates (Appendix 2) identified no historical resources as defined by Section 15064.5 within the Proposed Project area or property, nor were there any previous records of historical resources located on the subject property. With the incorporation of proposed **Mitigation Measure CUL-1**, the impact would be less than significant.

- b) **Finding:** The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. *Less than significant impact with mitigation incorporated.*

Discussion: The Cultural Resources Investigation Report completed by William Rich and Associates (Appendix 2) identified no archaeological resources as defined by Section 15064.5 within the Proposed Project area or property, nor were there any previous records of archaeological resources located on the subject property. However, due to the historic and prehistoric uses of the project site, there is potential of discovering unknown subsurface archaeological resources during the proposed construction activities, therefore, Mitigation Measure CUL-1 is included to ensure that potential project impacts on cultural resources are eliminated or reduced to less than significant levels. With the incorporation of **Mitigation Measure CUL-1** the impact would be less than significant.

- c) **Finding:** The project would not disturb any human remains, including those interred outside of formal cemeteries. *Less than significant impact with mitigation incorporated.*

Discussion: The Cultural Resource Investigation Report completed by William Rich and Associates (2021) did not identify any human remains on the project site. However, due to the historic and prehistoric uses of the project site, there is potential of discovering unknown human remains during the proposed construction activities, therefore, the inadvertent discovery protocol, **Mitigation Measure CUL-1** is included. With the proposed mitigation, the impact would be less than significant.

Mitigation Measures

CUL-1. If cultural materials for example: chipped or ground stone, historic debris, building foundations, or bone are discovered during ground-disturbance activities, work shall be stopped within 50-foot buffer of the discovery location, per the Cultural Resources Investigation Report. Work near the archaeological find(s) shall not resume until a professional archaeologist, who meets the Secretary of the Interior’s Standards and Guidelines, has evaluated the materials and offered recommendation for further action.

If human remains are discovered during project construction, work would be stopped at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The Humboldt County coroner would be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code, Section 5097). The coroner would contact the NAHC. The descendants or most likely descendants of the deceased would be contacted, and work would not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

3.2.6. ENERGY

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy and energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Electricity at the project site is currently provided by an existing 200-amp service from Pacific Gas and Electric Company (PG&E). The Proposed Project would utilize solar and PG&E to power the proposed facilities, including a proposed 600-amp electrical upgrade. Energy use would require a proposed electrical upgrade from PG&E and solar panels. Use of any on-site generators would be limited power outage events.

The State of California Building Energy Efficiency Standards under the California Building Code (CBC), known widely as Title 24, outline requirements for all new commercial and residential construction projects. Title 24 is part of California’s wider strategy to require all new commercial construction projects to be zero net energy by 2030 (California Energy Efficiency Strategic Plan, 2011). Title 24 standards would apply to any buildings seeking a commercial building permit from the Humboldt County Building Department, including the proposed 30’ x 100’ processing structure and the (4) 40’ x 8’ modular employee housing units.

The Humboldt County General Plan includes an Energy Element (Humboldt County, 2017). The Energy Element promotes self-sufficiency, independence, and local control in energy management and supports diversity and creativity in energy resource development, conservation, and efficiency. The Energy Element notes that key renewable energy resources include biomass, wind, wave, and small run-of-river hydroelectric. According to the Energy Element, local biomass resources are used to provide about 25% to 30% of the County’s electricity needs. Roughly half of the electricity serving Humboldt County is generated at the Pacific Gas and Electric Company Humboldt Bay Generating Station. The County imports about 90% of its natural gas; the rest is obtained locally from fields in the Eel River valley.

The County of Humboldt has prepared a draft Climate Action Plan for review in October 2021, which is currently being circulated. It has not been adopted as of the writing of this report. The CCLUO requires 100% renewable energy source for all proposed cannabis projects and includes Performance Standards for Energy Use.

Analysis

- a) **Finding:** The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. *Less than significant impact with mitigation incorporated.*

Discussion: Power for the Proposed Project would be needed for cultivation (fans and lights), nursery, drying, processing activities, security, and farmworker housing. At full build-out, the Proposed Project would require approximately 639,962 kWh of energy annually (Table 6). The majority of the power would be for the mixed-light cultivation, which is estimated to use approximately 456,889 kWh annually. The proposed commercial nursery would use approximately 126,043 kWh and the processing activities would use approximately 31,581 kWh annually. Farmworker housing, drying and security/general site utility would use the least amount of energy, at 12,892 kWh, 9,921 kWh, and 2,637 kWh annually, respectively (Appendix 1 - Cultivation and Operations Plan). Energy usage would fluctuate throughout the year, with peak energy usage during the months of May, July, and August, each estimated at approximately 98,000 kWh per month (Appendix 1 - Cultivation and Operations Plan).

Roof-mounted solar photovoltaic panels would be installed on the proposed structures. Specifically, a 52.5 kW system would be installed on each of the four (4) 4,800-sq. ft. drying buildings, a 33 kW-system would be installed on each of the two (2) indoor 3,000-sq. ft. commercial nursery buildings (CN-3), a 33 kW-system would be installed on the 3,000-sq. ft. processing building, and a 3.5kW system would be installed on each of the four (4) 320-sq. ft. modular farmworker housing structures. In total, the proposed photovoltaic solar power system would have an energy capacity of 323 kW, which would generate approximately 565,896 kWh of annual energy production, assuming 4.8 annual average daily peak sun hours in Petrolia (Appendix 1 – Site Maps, Renewable Energy Table).

The 565,896 kWh of annual energy production represents approximately 88% of the total project energy demand. The remaining energy would be sourced from the proposed PG&E upgrade. The project would be built out over a five-year period and subsequently energy would gradually increase over the same period. At no time would the project build-out or intensity exceed the available energy (e.g., during the first operational year all cultivation would be full-sun or light-deprivation with limited energy demand). This has been incorporated as **Mitigation Measure EN-1.**

Generators would not be utilized as a source of power. A back-up generator would remain onsite for emergency purposes only.

Renewable energy is proposed to meet all of the energy demand for this project. **Mitigation Measure EN-1** has been included to ensure that all power for the Proposed Project comes from renewable energy sources and to ensure that the scale of Project build-out is developed in concert with available power supply. No aspect of the project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. With mitigation incorporated, a less than significant impact would occur.

- b) **Finding:** The project would not conflict with or obstruct a state or local plan for renewable energy and energy efficiency. *Less than significant impact.*

Discussion: The project would not conflict with the Humboldt County General Plan Energy Element. The project would only use the amount of electricity required for its operations, supplied in full by renewable energy, and not in a wasteful manner. A less than significant impact would occur.

Mitigation Measures

EN-1 Power supply shall be developed to support the scale of the Proposed Project during phased build out. Mixed-light cultivation shall not occur until required power sourced from a renewable source is brought to the site (e.g., installation of solar power or completion of a PG&E upgrade). Prior to the onset of power, proposed cultivation shall be outdoor cultivation cultivated using light-deprivation techniques in greenhouses. At no point in time shall onsite activities exceed existing site power capacity.

3.2.7. GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project site is a 517-acre parcel that is located east of the community of Petrolia in the unincorporated area of Humboldt County in the Lower Mattole River USGS HUC-12 watershed. All proposed development would occur on Benbow Soils, identified by Map Unit Symbol 152 in Figure 8 (Web Soil Survey, 2022). Benbow soils range from very gravelly loam to sandy loam, and are classified as well-drained, non-prime soils (Appendix 2 - Web Soil Survey Type Map).

The Proposed Project site is located within Northern California’s Coast Ranges Geomorphic Province, which is a geologically active region at risk for strong ground shaking. Humboldt County is located within the two highest of five seismic risk zones specified by the Uniform Building Code. The Cascadia Subduction Zone runs north offshore of Humboldt, Del Norte, Oregon, and Washington. Landslides and soil slips are common due to the combination of sheared rocks, shallow soil profile development, steep slopes, and heavy seasonal precipitation (Humboldt County 2025 General Plan Update. Natural Resource and Hazards Report; Pg. 10-9).

The Proposed Project site is situated in an active earthquake zone, as is all of Humboldt County. The nearest quaternary fault is the North Fork Road thrust fault zone, the southern extent of which is located in the Proposed Project area (Figure 9). Other nearby faults and fault zones include the Unnamed fault SE of Cape Mendocino and the Honeydew Fault zone. The Proposed Project is not located within an Alquist Priolo Zone. The nearest Alquist Priolo Zone is located approximately 20 miles south of the project site, near the community of Shelter Cove (Humboldt County Web GIS, 2022).

Historic landslides have been mapped in the eastern portion of the subject property, on APN 104-191-001 The subject property contains a historic landslide in the eastern forested portion of the property (Humboldt County Web GIS, Figure 9).

The property is not listed as an area of potential liquefaction and is located within an area Low Instability (Humboldt County Web GIS, 2022).

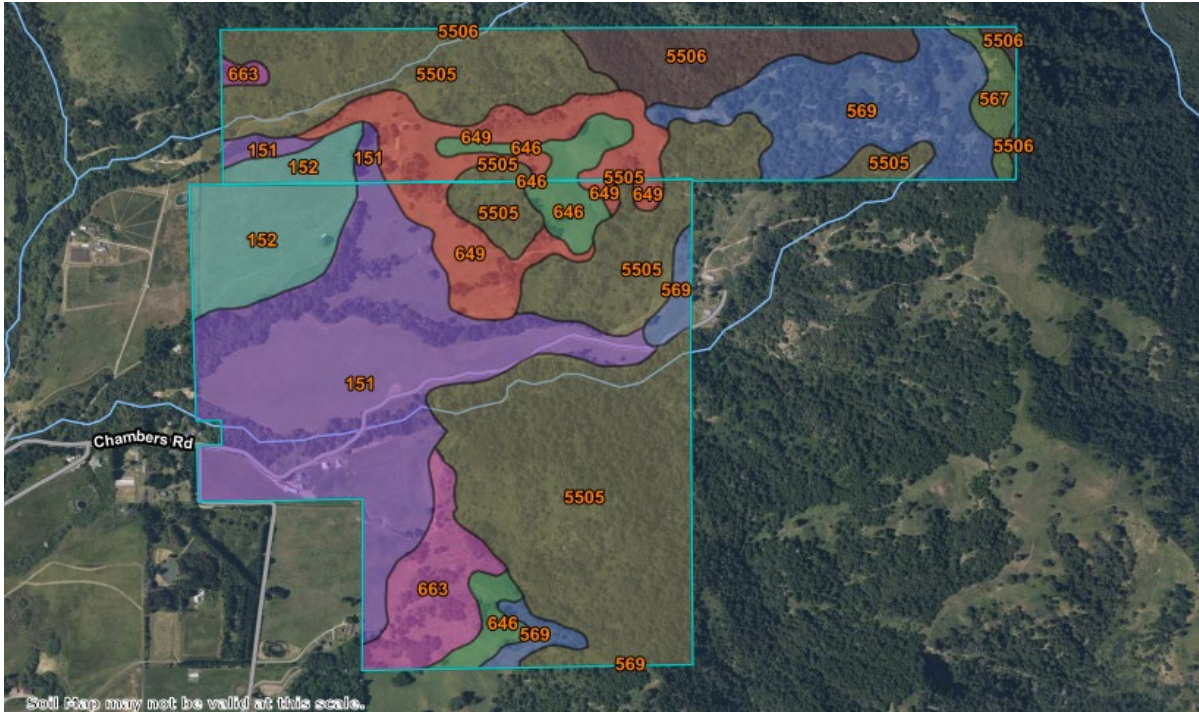


Figure 8: Proposed Project Site Soil Map Units - Proposed Project Area located entirely on Benbow Soils, Unit 152 (Source: Web Soil Survey, 2022 - Appendix 2)

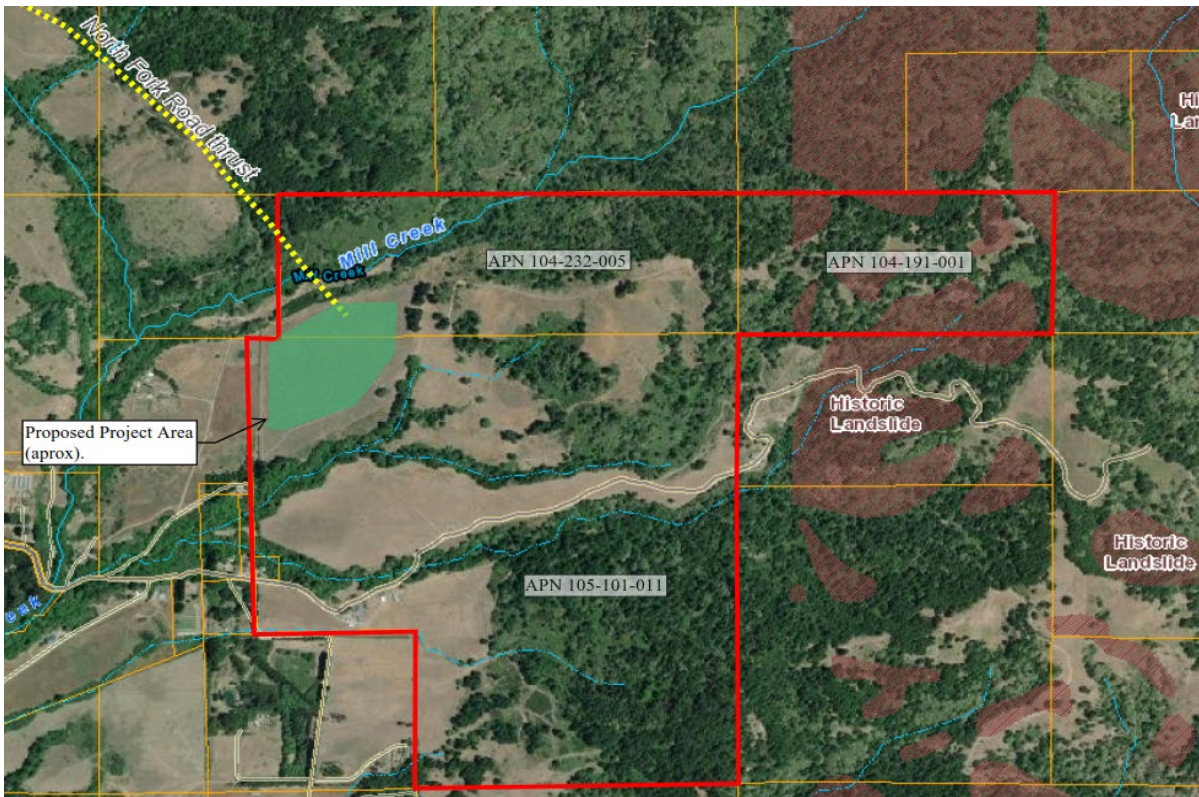


Figure 9: Earthquake Fault and Historic Landslide on Subject Parcel (Source: Humboldt Web GIS, 2022)

Analysis

- a. i) **Finding:** The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. *Less than significant impact.*

Discussion: Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake’s seismic waves. The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and pavement structures, and cause failure of overhead as well as underground utilities.

There are no earthquake faults delineated on Alquist Priolo Fault Zone maps within the project area (California Geological Survey, 2010 and Humboldt Web GIS, 2022). The closest fault is the North Fork Road thrust fault zone, an undifferentiated quaternary fault that overlaps minimally with the Proposed Project area. No earthquakes have been associated with this fault (USGS, 2022). Since the project area is not traversed by a known active fault and is not within 200 feet of an active fault trace, surface fault rupture is not considered to be a significant hazard for the project site any more than in other areas of earthquake-prone Humboldt County. Therefore, the project would not expose people or structures to substantial adverse effects from a fault rupture and the impact would be less than significant.

- a. ii) **Finding:** The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. *Less than significant impact.*

Discussion: Earthquakes on active faults in the region have the capacity to produce a range of ground shaking intensities in the project area. Ground shaking may affect areas hundreds of miles distant from an earthquake’s epicenter. Ground motion during an earthquake is described by the parameters of acceleration and velocity as well as the duration of the shaking. A common measure of ground motion is peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g). Moderate earthquake hazard areas are defined as areas with ground accelerations of less than .092g and Violent earthquake hazard areas have ground accelerations of 0.65g to 1.24g. The California Geological Survey, Probabilistic Seismic Hazards Mapping Ground Motion Page (www.conservation.ca.gov) indicates a maximum PGA on the order of 0.61g for a seismic event with a 10 percent probability of exceedance in 50 years (design basis earthquake).

See discussion in a, i), above. There are no earthquake faults delineated on Alquist Priolo Fault Zone maps within the Proposed Project area. However, the Proposed Project area is located within a seismically active area of Northern California and some degree of ground motion resulting from seismic activity in the region is expected during the long-term operation of the project. The State of California provides minimum standards for building design through the California Building Code (CBC). Where no other building codes apply, CBC Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the State and is based on the federal Uniform Building Code (UBC) used widely throughout the country. The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in CBC Chapter 16. The Code identifies seismic factors that must be considered in structural design.

The Proposed Project structures would be required to follow all requirements outlined in the CBC. In addition, an R-2 Soils Report would be developed for all proposed buildings during the permitting process prior to

construction to identify site-specific constraints. Therefore, the Proposed Project would not expose people or structures to substantial adverse effects involving strong seismic ground shaking.

- a. iii) Finding: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. *No impact.*

Discussion: Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluidlike behavior of the soil. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables and buildings with shallow foundations.

According to the Humboldt County Web GIS system (2022), the project site is not designated as an area subject to liquefaction. Therefore, the Proposed Project would not expose people or structures to substantial adverse effects involving seismic-related ground failure, including liquefaction, and there would be no impact.

- a. iv) Finding: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. *Less than significant impact.*

Discussion: Slope failures, commonly referred to as landslides, include many phenomena that involve the downslope displacement and movement of material, either triggered by static (i.e., gravity) or dynamic (i.e., earthquake) forces. Earthquake motions can induce significant horizontal and vertical dynamic stresses in slopes that can trigger failure. Earthquake-induced landslides can occur in areas with steep slopes that are susceptible to strong ground motion during an earthquake. The youthful and steep topography of the coast range is known for its potential for landslides.

The Proposed Project area does not contain any areas of known high slope instability. All historic landslides on the Proposed Project property are located in the eastern area of APN 104-191-001, where slopes are steeper and no development is proposed (Figure 9). Therefore, the Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

- b) Finding: The project would not result in substantial soil erosion or the loss of topsoil. *Less than significant impact.*

Discussion: Scraping, grading, ground disturbance, and the removal of on-site groundcover and vegetation (e.g., grasses) within the project footprint would occur during construction of the proposed structures, greenhouses, and nursery. Given that Building Code requirements relating to soil stability would be adhered to during construction as part of the Building Permit, the relatively flat topography of the project site and that the Proposed Project must adhere to the requirements of the SWRCB Cannabis General Order 2019-0001-DWQ and SWRCB Construction General Permit (CGP), which stipulates employment of Best Management Practices (BMP's) and Best Practicable Treatment or Control measures (BPTCs), and the standard erosion control measures of the Humboldt County General Plan, the Proposed Project is not expected to result in significant soil erosion or loss of topsoil during the construction phase or for the life of the Proposed Project.

Soil qualities can be an indicator of the potential loss of topsoil due to disturbance from proposed development. The Proposed Project area is in Benbow soils, which have a low wind erodibility group index rating of 8, meaning that the area proposed for development is not susceptible to wind erosion (Web Soil Survey, 2022). Additionally, Benbow soils have a very low K factor of 0.05, indicating that the soil is not very susceptible to sheet and rill erosion by water (Web Soil Survey, 2022).

The Proposed Project does not involve the removal of any vegetation outside of the Proposed Project footprint that could result in erosion. Hand watering or drip irrigation methods minimize the over-irrigation of plants and subsequent runoff. Additionally, to prevent runoff to riparian areas, water conservation and containment measures would be implemented including the maintenance of a stable, vegetated buffer between the cultivation areas and riparian zone. Therefore, the Proposed Project would not result in substantial soil erosion or the loss of topsoil and a less than significant impact would occur.

- c) Finding: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. *Less than significant impact.*

Discussion: According to Humboldt County GIS data, the parcel is not mapped within an area of potential liquefaction. The National Earthquake Hazards Reduction Program (NEHRP) denotes project soils as Geological Unit C, indicating very dense soil and soft rock (NEHRP, 2022). Design and construction of the project would incorporate appropriate engineering practices to ensure seismic stability as required by the CBC and county standards. Therefore, the Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse and a less than significant impact would occur.

- d) Finding: The project would not be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property. *Less than significant impact.*

Discussion: Expansive soils possess a “shrink-swell” characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time due to expansive soils, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Benbow soils (Appendix 2 - Web Soil Survey, 2022) are characteristic of sandy to gravelly loam, which are not typically expansive soils. See discussions above. Therefore, the Proposed Project would not be located on expansive soils creating substantial risks to life or property. Impacts would be less than significant, and no mitigation would be necessary.

- e) Finding: The project would not 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. *Less than significant impact.*

Discussion: The existing onsite residence includes an unpermitted septic tank and leach field. The proposed processing facility and proposed modular farmworker housing units would require a new onsite wastewater treatment system. The proposed new system would be located just south of the farmworker housing units (Appendix 1 – Site Map).

State law requires permits for onsite systems to ensure that they are constructed and sited in a manner that protects human health and the environment. A Septic Feasibility Study, conducted by OurEvolution Engineering (August 2021), analyzed the soils and found that the proposed location would be adequate to support a safe and effective onsite wastewater treatment system (Appendix 2). The Septic Feasibility Study included an on-site analysis of the proposed septic system. Two 10-ft. deep test pits were excavated at the locations of the proposed primary and reserve leach fields. Soil samples were collected and tested for bulk density and particle size analyses by North Coast Laboratories. Results showed that Zone 2 soils are present at both test pit locations, demonstrating that, in accordance with the Humboldt County Onsite Wastewater Treatment System Regulations and Technical Manual, soil properties can be used to calculate the system size and further percolation testing is not required (Appendix 2 - Septic Feasibility Study, 2021). Additionally, no

groundwater or impermeable layers were observed in pits. The septic tank, leach field, and secondary leach field for the processing building would be located outside the wetland and riparian setbacks (Appendix 1 – Site Maps). A permit would be obtained through the Division of Environmental Health prior to installation of the onsite wastewater treatment system.

Therefore, the Proposed Project would not have soils incapable of adequately supporting the use of septic tanks for the disposal of wastewater. In addition, the system would be reviewed and approved by the County Division of Environmental Health. Impacts would be less than significant, and no mitigation would be necessary.

- f) **Finding:** The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. *Less than significant impact with mitigation incorporated.*

Discussion: Regional uplifting and other seismic activity in the area have limited the potential for discovery of paleontological resources. However, there is a potential for fossils to be discovered and inadvertently damaged during project construction even in an area with a low likelihood of occurrence. As such an inadvertent discovery protocol for paleontological resources has been included as Mitigation Measure CUL-1. With the proposed **Mitigation Measure GEO-1**, the Proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Mitigation Measures

GEO-1. If paleontological resources are encountered during implementation of the Project, ground disturbing activities will be temporarily redirected from the vicinity of the find. A qualified paleontologist shall be retained by the developer to make an evaluation of the find. If a significant paleontological resource(s) is discovered on the property, the qualified paleontologist shall develop a plan of mitigation which shall include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation in the find a local qualified repository, and preparation of a report summarizing the find.

3.2.8. GREENHOUSE GAS EMISSIONS

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

Setting

The Proposed Project site is located within the North Coast Air Basin, which is under the jurisdiction of the North Coast Air Quality Management District (NCAQMD). The NCAQMD applies air pollution regulations to all major stationary pollution sources and monitors air quality. GHGs are emitted into the atmosphere around from a variety of sources, including the combustion of fuel for energy and transportation, cement manufacturing, and refrigerant emissions. GHGs are gases that have the ability to trap heat in the atmosphere, a process that is analogous to the way a greenhouse traps heat. GHGs are emitted from human activities, as well as through natural processes. Increasing GHG concentrations in the atmosphere are leading to global climate change.

The primary GHGs that are of concern for development projects include Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. Emissions of CO₂ are largely by-products of fossil fuel combustion and CH₄ results from off-gassing associated with agricultural practices and landfills (California Air Resources Board, 2017; Humboldt County General Plan, 2017).

Greenhouse gases are regulated on federal, state, and local levels. At the state level, Assembly Bill (AB) 32 Scoping Plan (2017 Update) contains the main strategies California will use to reduce GHG emissions. AB 32 was originally passed by the California Global Warming Solutions Act of 2006 and details strategies and greenhouse gas reduction goals for projects across the state, including the now-achieved requirement to reduce statewide GHG emissions to 1990 levels by 2020 (a 28% reduction). In 2016, AB 32 was amended to require California to reduce GHG emissions to 40% below 1990 levels by 2030 (California Air Resources Board, 2017).

Locally, Humboldt County is complying with AB 32 to reduce GHG emissions to 40% below 1990 levels by 2030. The County has been coordinating with other local agencies to finalize a regional Climate Action Plan (CAP) to reduce greenhouse gas (GHG) emissions throughout Humboldt County. The first draft of the CAP was released in 2012. The CAP explores locally oriented strategies to reduce emissions from vehicle travel, electricity consumption, natural gas use and other sources of GHGs. The current Humboldt Regional Climate Action Plan, Environmental Review Draft, October 21, 2021, document is currently under review by City and County staff. An updated version was not available at the time of the preparation of this document, so the 2012 version was used for reference and project analysis.

The County has existing programs and policies in place that reduce and minimize GHG emissions:

- Draft Humboldt County Regional Climate Action Plan (2012)
- Air Quality Element, Humboldt County General Plan (2017)
- Commercial Cannabis Land Use Ordinance (2018)
- California Air Resources Board Climate Change Scoping Plan (2017)
- NCUAQMD Particulate Matter Attainment Plan (1995)

Sources of greenhouse gas emissions from the project would occur during short-term construction activities (e.g. equipment) and long-term operation of the project (e.g. lights, fans, odor control measures, vehicle/truck traffic, equipment, residential energy use, and back-up generators used during power outages). Propane would be used in the nurseries.

- a) **Finding:** The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. *Impacts are less than significant.*

Discussion: The Proposed Project would significantly impact greenhouse gas (GHG) emissions if it were to generate substantial GHG emissions exceeding the CEQA thresholds of significance adopted by the NCAQMD and Humboldt County. NCAQMD and Humboldt County have not adopted thresholds of significance for GHG emissions from non-stationary sources. However, the Bay Area Quality Management District (BAAQMD) has established GHG thresholds that can be used in for significance determination. These thresholds are used by other counties in California without adopted thresholds of significance. Thus, for the analysis of GHG emissions, BAAQMD’s GHG thresholds are used to evaluate the significance of the Proposed Project’s GHG emissions. For land use development projects, the BAAQMD GHG threshold is “annual emissions less than 1,100 metric tons per year (MT/yr) of CO₂e” (BAAQMD, 2017).

Mobile sources of greenhouse gases from the Proposed Project would include equipment used during short-term construction and vehicle/truck traffic from long-term operation. All construction equipment would be maintained to meet current emissions standards as required by the California Air Resources Board (CARB). The bulk of operational greenhouse gas emissions would come from vehicle and truck traffic as the Proposed Project is in a rural location in the unincorporated area of Humboldt County, trips from larger metropolis areas (e.g., Eureka), are a source of greenhouse gas emissions. However, the Proposed Project has incorporated four (4) modular farmworker housing units to provide housing and reduce trip mileage for some employees. The Community Support Facilities of processing and nursery would provide services for other local farms in the Petrolia/Honeydew area which do not currently have ample access to such facilities, which could reduce the frequency of trips to Eureka or Garberville by other local cultivators. Additionally, the applicant would encourage carpooling where possible to reduce vehicle trips.

In addition, the Proposed Project would be electrically powered exclusively by renewable energy sources, primarily through a solar panel system. By installing a 323-kW capacity solar system to power the majority of the activities, the project greatly reduces greenhouse gas emissions from operational energy use (e.g. lights, fans, residential energy use). All buildings would be designed to meet or exceed Title 24 requirements, in accordance with the California Building Code. Propane would be used in the nurseries to provide some heating for juvenile plant propagation.

Construction and operation GHG emissions were estimated using the California Emission Estimator Model (CalEEMod®) Version 2020.4.0 (Appendix 2). Information for the CalEEMod Analysis was derived from applicant information and correspondence, and default parameters were used where appropriate (e.g., construction equipment list). Mitigation measures available in the model, such as carpooling, Title 24 compliance, the offset of propane use, and use of renewable energy, were not included in the analysis and

therefore the CalEEMod analysis represents a conservative estimation of Project emissions. The results are summarized in Table 9.

Table 9: Proposed Project Greenhouse Gas Emissions (Source: CalEEMod, 2022)

Emission Source	CO ₂ e (MT/yr)	BAAQMD Threshold (MT/yr)	Exceeds Threshold?
Construction - Unmitigated	156.3	1,100	No
Operation - Unmitigated	103.0	1,100	No

As can be seen in Table 9, emissions of GHGs would be below the BAAQMD CEQA threshold, and therefore significant or cumulative impacts to the environment due to GHG emissions from the project are not likely. Thus, the Proposed Project would not generate GHGs, either directly or indirectly, that would have a significant impact on the environment and impacts would be less than significant.

- b) **Finding:** The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gas. *Less than significant impact.*

Discussion: The Proposed Project would significantly impact greenhouse gas (GHG) emissions if it were to conflict with an adopted plan, policy or regulation intended to reduce GHG emissions. The project proposes a facility that would involve the cultivation and processing of cannabis. For the purposes of this analysis, the Proposed Project was evaluated against the following applicable plans, policies, and regulations (also listed above).

1) Humboldt County Draft Climate Action Plan (2012)

Humboldt County prepared a Draft Climate Action Plan in 2012 which includes a comparison of greenhouse gas emissions from 2006 and 1990. The emissions of carbon dioxide equivalents in unincorporated Humboldt County in 2006 were shown to have declined by approximately a half million metric tons when compared to 1990 levels. This decrease may be attributed to a decline in industrial emissions in Humboldt County since 1990 related to a decline in the lumber industry and closure of several major industrial facilities related to timber processing. The County’s 2012 Draft Climate Action Plan contains strategies for reducing greenhouse gas emissions. As discussed above, an updated Climate Action Plan is currently under review. This project, as proposed, mitigated, and conditioned, is consistent with the following GHG reduction strategies listed in the County of Humboldt Climate Action Plan:

- *Reduce length and frequency of vehicle trips:* See discussion above. The Proposed Project would inherently increase vehicle trips to the property, as a commercial use is being proposed. At full build-out, the Proposed Project would result in an average of 8 daily trips by full-time employees and 44 trips by seasonal contract laborers during peak seasonal events and 0-2 daily truck trips. Thus, at peak season during full build out, the maximum daily vehicle trips would be approximately 54, which classifies the project as a “small project”, having fewer than the Governor’s Office of Planning and Research (OPR) threshold of 110 daily new trips (Office of Planning and Research, 2018). The project design has incorporated farmworker housing to help reduce trips for some employees. The Proposed Project would also serve as a Community Support Facility for the surrounding Petrolia and Honeydew areas, supporting nearby farms who could now utilize the processing and nursery services proposed in this project rather than traveling to a larger metropolitan area (e.g., Eureka or Garberville), subsequently reducing vehicle trips.
- *Promote the revitalization of communities in transition due to the decline of resource-based industries:* This Proposed Project would provide nursery and processing activities as Community Support Facilities to the Petrolia and Honeydew areas. Additionally, it would employ 12 full-time employees

and up to 22 seasonal/contract laborers in the area, helping facilitate economic development in rural Humboldt County.

2) Humboldt County General Plan – Air Quality Element (2017)

The Air Quality Element of the Humboldt County General Plan (Chapter 15) describes the County’s policies to reduce greenhouse gas emissions and mitigate climate change. The General Plan provides greenhouse gas-related Goals and Policies for projects to meet, including the following relevant policies:

- *AQ-P1. Reduce Length and Frequency of Vehicle Trips*: See discussion above.
- *AQ-P11. Review of Projects for Greenhouse Gas Emission Reductions*, which states that the County shall evaluate GHG emissions of new large-scale commercial projects for compliance with state regulations and require feasible mitigation measures to reduce GHG emissions. See discussion above.
- *AQ-P14. Solar Electric System Capacity*, which states that the County shall encourage and provide incentives to increase solar electric capacity in residential, commercial, and industrial sectors. The Proposed Project proposes the use of renewable energy.
- *AQ-P15. Energy Efficient Building Design*, which states that the County shall encourage and provide incentives for construction of buildings beyond Title 24 requirements. The Proposed Project would meet Title 24 requirements.

3) Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO, 2018)

The CCLUO requires that all electricity for new commercial cannabis projects must be exclusively provided by a “renewable energy source”, defined as generating power without the use of petroleum or other fossil fuels (CCLUO, 2018) The Proposed Project would be powered by photovoltaic panels and a renewable energy plan from on-grid PG&E power, and thus complies with the renewable energy Performance Standards of the CCLUO.

4) California Air Resources Board Climate Change Scoping Plan (2017)

The 2017 Climate Change Scoping Plan developed by the California Air Resources Board (CARB) provides context and strategies to help achieve statewide greenhouse gas emission reduction goals. Appendix B of the Scoping Plan includes suggested actions that local governments can take to support the State’s climate goals. The Project is consistent with the following applicable GHG reduction measures identified in the Scoping Plan:

- *Energy Efficiency / Green Building Strategy*: The proposed buildings associated with the project would comply with the California Building Code and California Energy Code and thus would include the required energy features to be consistent with this measure.
- *Renewable Portfolio Standard to achieve 60% renewable energy mix statewide by 2030*: The Proposed Project would source energy from solar and PG&E. Solar is inherently a renewable energy source, and PG&E currently obtains 33% of its power supply from renewable energy sources, which is on track to meet the 60% renewable energy mix by 2030 (PG&E website, Accessed April 2022). If utilizing PG&E, the project would be required to enroll in a PG&E renewable energy program, such as the “100% Solar Choice” plan or the “RePower+” plan (PG&E, 2022).
- *Million Solar Roofs Program*: The Proposed Project would comply with Title 24 energy requirements, which requires new buildings to be “solar ready”. The Proposed Project includes a 323-kW capacity roof-mounted solar photovoltaic power system.

5) NCUAQMD Particulate Matter Attainment Plan

The NCUAQMD prepared a Particulate Matter Attainment Plan, Draft Report, in May 1995 with the goal of achieving and maintaining state ambient air quality standards for PM₁₀. This report includes a description of the planning area (North Coast Unified Air District), and emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD’s attainment plan established goals to reduce PM₁₀ emissions and eliminate the number of days in which standards are exceeded. The plan includes

three areas of recommended control strategies to meet these goals – transportation, land use and burning. Control measures for these areas are included in the Attainment Plan. Compliance with the control measures in the Particulate Matter Attainment Plan would not only result in a reduction of PM₁₀ emissions but would also result in a reduction of GHG emissions. Control strategies focused on reducing transportation emissions, more efficient land use patterns, and reducing emissions from burning activities would also reduce the amount of GHG emissions. The proposed facility would be designed to meet all California Building Code and Title 24 Standards. Heating for the nurseries would be achieved through the use of commercial propane heaters, not woodstoves or fireplaces, thus reducing GHG emissions generated from heating during long-term operation of the project.

Therefore, the Proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Mitigation Measures

None.

3.2.9. HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project involves cannabis cultivation, processing (including harvesting, bucking, drying, and trimming), a commercial nursery, and farmworker housing. Agricultural chemicals, including fertilizers, soil amendments, pesticides, fungicides, and petroleum products, including diesel and gasoline, would be used for agricultural operations. The project site is located in Humboldt County near the community of Petrolia, and has historically been used for agricultural purposes.

The State Water Resources Control Board (SWRCB) Geotracker website (accessed February 2022) did not identify any cleanup sites on the subject parcel. The nearest Cleanup Program Site is the “Petrolia Elementary School” Cleanup Program, a closed diesel cleanup site located at 29289 Chamber Road approximately 2,500 feet from the Proposed Project area. Additionally, the Department of Toxic Substances Control (DTSC) EnviroStor website (accessed February 2022) did not identify any mapped hazardous waste or cleanup sites within a mile of the Proposed Project area.

The Proposed Project site has a CalEnviroScreen score between 26-30% (CalEnviroScreen 3.0, accessed February 2022). The CalEnviroScreen mapping tool helps identify California communities that are most affected by sources of pollution, and where people are often especially vulnerable to pollution effects. The scores are mapped so that different communities can be compared. Scores range between 1-100%. An area with a high score is one that experiences a much higher pollution burden than areas with low scores. The low score of 26-30% indicates that the subject parcel is not likely to be recognized as a highly disadvantaged area from environmental pollution.

The closest school to the project site is the Mattole Unified School District, approximately 1 mile west of the project site. The closest airport is Rohnerville Airport, which is approximately 17 air miles northeast of the project site. According to the Humboldt County WebGIS, the Proposed Project site is located in a Moderate Fire Hazards Severity Zone. No portion of the subject property is located within a FEMA Flood Zone or a dam failure inundation zone (Humboldt Web GIS, 2022). The project is not located in the Coastal Zone and would not be impacted by a tsunami or sea level rise.

Analysis

- a) **Finding:** The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. *Less than significant impact.*

Discussion: The Proposed Project site would be developed for the cultivation and processing of cannabis, which typically uses hazardous materials including fertilizers, herbicides, pesticides, petroleum products, as well as vehicle and equipment fluids and lubricants. These materials would be transported to the site and used at the facility. No disposal of hazardous materials would occur as part of the Proposed Project.

The risks associated with the routine transport, use, and storage of these materials during construction are anticipated to be relatively small. With appropriate handling and disposal practices consistent with the SWRCB Cannabis General Policy and General Order WQ 2019-0001-DWQ, there is relatively little potential for accidental release of hazardous materials during construction or operation. Storage and handling of materials would employ BMPs and BPTCs. The Site Management Plan required by the General Order, would include provisions for safely refueling equipment, and spill response and containment procedures.

Fertilizers, nutrients, and soil amendments anticipated to be used include Earth Juice Rainbow Mix Pro Grow/Bloom, General Hydroponics Grow, oyster shell, gypsum, lime, dolomite, azomite, compost, and worm castings. Other legal fertilizers, nutrients, and soil amendments similar to the above could also be used during operations. Pesticides anticipated to be used include sulfur products, neem oil and other plant oils (e.g. garlic,

cottonseed, corn, clove, etc.), Green Cleaner, Dr. Zymes, Regalia (*Reynoutria sachalinensis*), Grandevo (*Chromobacterium subtsugae*), Venerate XC, & biological controls (e.g., ladybugs) (Appendix 1 – Cultivation and Operations Plan). Pesticides and fertilizers would be applied directly to plants, and would be applied over 550 feet from the nearest residence.

Petroleum products, including gasoline and diesel, are currently stored onsite to maintain existing residential and agricultural operations (e.g. to power tools, equipment, etc.). Petroleum products associated with the Proposed Project would include gasoline and diesel stored in small-quantity sealed containers (e.g. 5-gallon gas cans). All petroleum products would be stored within secondary containment. Refueling of small equipment (e.g. weed whacker, tools, generator, etc.) would be conducted onsite over secondary containment and greater than 100 feet from any watercourses. Refueling of larger equipment (e.g., tractor or backhoe) would be conducted offsite at a properly licensed facility.

BMP's and BPTCs outlined in the Cannabis General Order (refer to Attachment A of the Order on the SWRCB website) would be employed when storing, handling, mixing, application and disposal of all fertilizers, pesticides and fungicides. All nutrients, pesticides and fungicides would be located in a locked storage room, and contained within water-tight, locked and labeled containers in accordance with manufactures' instructions. Application rates would be tracked and reported with the end of the year monitoring report required in the Site Management Plan. Employees responsible for application are trained to handle, mix, apply or dispose of pesticides/fungicides with proper hand, eye, body, and respiratory protection in accordance with the manufacturer's recommendations.

In addition, the Proposed Project has enrolled State Water Resources Control Board (SWRCB) for coverage under Order No. WQ 2019-001-DWQ (Cannabis General Order – WDID 1_12CC428193). A Notice of Applicability was issued by the SWRCB for the site (Appendix 2). To comply with the Cannabis General Order, a Site Management Plan is being prepared. The SWRCB program and County ordinance have “standard conditions” applicable to cannabis operations that address impacts from the storage and use of hazardous materials which include the following requirements:

- Any pesticide or herbicide product application would be consistent with product labeling and be managed to ensure that they would not enter or be released into surface or groundwater;
- Petroleum products and other liquid chemicals would be stored in containers and under conditions appropriate for the chemical with impervious secondary containment; and
- Implementation of spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.

With appropriate storage, handling, and application practices that comply with the requirements of the NCRWQCB and Humboldt County, it is not anticipated that the use of these materials at the facility would pose a significant hazard. Therefore, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- b) Finding: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. *Less than significant impact.*

Discussion: See above discussion. The Proposed Project involves the cultivation and processing of cannabis which is a use that typically uses hazardous materials including fertilizers, herbicides, pesticides, petroleum products, as well as vehicle and equipment fluids and lubricants. As described in subsection a), fertilizers, pesticides, lubricants and oils (less than 5-gallons), and diesel (less than 10-gallons) would be stored and used

at the site. The fertilizers, and pesticides used by the project would primarily be in five-gallon containers and stored within the proposed facility for containment.

If required, the applicant would file a Hazardous Materials Business Plan with the County Division of Environmental Health for the storage and handling of the various materials described above at the site. With appropriate storage, handling, and application practices, it is not anticipated that the use of these materials would pose a significant hazard. In the event of foreseeable upset and accident conditions, it is unlikely that these hazardous materials would be released in a manner that would create a significant hazard to the public or the environment. Therefore, the Proposed Project would not 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) Finding: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. *No impact.*

Discussion: There are no schools located within one-quarter mile of the project site. The Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No impact would occur and no mitigation would be necessary.

- d) Finding: The project would not 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 not create a significant hazard to the public or the environment. *No impact.*

Discussion: The Proposed Project site was not included on a site which is included on a list of hazardous materials sites, and no hazardous sites were identified within 2,000 feet of the project site (SWRCB Geotracker website and DTSC EnviroStor, 2022). Because the Proposed Project is not listed as a hazardous materials site, implementation of the Proposed Project would not create a significant hazard to the public or the environment. No impact would occur, and no mitigation would be necessary.

- e) Finding: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area. *No impact.*

Discussion: The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport is Rohnerville Airport, located over 17 miles away. Therefore, the Proposed Project would not result in a safety hazard for people residing or working in the project area. No impact would occur, and no mitigation would be necessary.

- f) Finding: The project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. *Less than significant impact.*

Discussion: The Proposed Project would use existing roadways (Chambers Road) in Petrolia to access the project site. A Road Evaluation conducted by OurEvolution Engineering (Appendix 2) concluded that Chambers Road is developed to Category 4 Road standards and subsequently could accommodate the Proposed Project. At the project site, onsite roads would include emergency turnarounds (Appendix 1 – Site Maps). The proposed access improvements would improve emergency access and circulation to and within the project site. Additionally, the applicant would supply local emergency services with the gate code or would install a lockbox for emergency access only.

The Proposed Project would be required to comply with the Humboldt County Fire Safe Ordinance 1952, which the California Board of Forestry and Fire Protection has accepted as functionally equivalent to PRC 4290. The

County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signing of streets and buildings, minimum water supply requirements, and setback distances for maintaining defensible space (CALFIRE, 2017). The improvement plans for the Proposed Project would be reviewed to verify compliance with the County’s Fire Safe Ordinance which would ensure that adequate access for emergency response and evacuation is provided. As such, this project would not interfere with any emergency response or evacuation plan. Therefore, the Proposed Project would not impair the implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan.

- g) **Finding:** The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to an urbanized area or where residences are intermixed with wildlands. *Less than significant impact.*

Discussion: The Proposed Project would be required to comply with the Humboldt County Fire Safe Ordinance (County Code Section 31111 et seq), which CalFire has accepted as functionally equivalent to PRC 4290. The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signing of streets and buildings, minimum water supply requirements, and setback distances for maintaining defensible space. The project site is accessed by Chambers Road, which is developed to Category 4 standards (Road Evaluation, 2021 – Appendix 2). improvement plans for the Proposed Project would be subject to approval by the Humboldt County Building Department to verify compliance with the County’s Fire Safe Ordinance which would ensure that adequate access for emergency response and evacuation is provided.

Fire protection in Humboldt County is provided by local districts, cities, and CALFIRE. The project site is within the Petrolia Fire Protection District Fire Response Area. CALFIRE identifies fire hazard severity zones in State Responsibility Areas (SRA) throughout California. According to Humboldt County Web GIS mapping, the project area is located in a moderate fire hazard severity zone within the SRA. The County of Humboldt Office of Emergency Services coordinates emergency response in Humboldt County through the Humboldt Operational Area. The Humboldt Operational Area is composed of the County of Humboldt, serving as the lead agency, and all political subdivisions (cities and Special Districts) within the county.

The risk of causing a wildfire would not be significant during construction and operation because the project activities would comply with state and local requirements. Equipment shall be “fire-safe”, i.e. operating under a fire safety plan and equipped with spark arrestors. The access road shall be maintained in a state such that it is free of vegetation during times of activity.

Fueling of vehicles/equipment during construction activities would occur off-site or be transported and dispensed from pick-up trucks equipped for such a purpose. During long-term operation of the project, fuel would be stored on-site for equipment use in containers designed for fuel storage that includes secondary containment.

As required by fire code, all of the existing and proposed buildings, except the greenhouse structures and the drying barn, would be developed with fire suppression systems. In addition, SRA improvements include management of trees and vegetation around existing structures to maintain the required 100-foot defensible space and all structures on the property meet the 30-foot SRA setback requirement from property lines. Therefore, the Proposed Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Potential impacts would be less than significant and no mitigation would be necessary.

Mitigation Measures

None.

3.2.10. HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The project site is located within the Lower Mattole River HUC-12 Watershed in the unincorporated area of Humboldt County near the community of Petrolia. The Mattole River watershed encompasses approximately 304 square miles and originates in northern Mendocino County. The Proposed Project site contains elevations ranging from 225 to 860 feet above sea level and receives an average of 74 inches of rain per year, though precipitation can vary widely from year to year.

The property contains several watercourses, including Mill Creek, a perennial (Class I) watercourse, two seasonal (Class II) watercourses, and several ephemeral (Class III) drainages. Appropriate buffers (150 ft., 100 ft., and 50 ft., respectively) have been designated for these watercourses in accordance with County and State requirements. All watercourses generally flow westerly through the parcel and are tributaries to the Mattole River. No mapped wetlands were identified on the project parcel. The site is not connected to a municipal storm drainage system.

Three (3) stream crossings (STX) exist onsite, including one bridge (STX-1) and two culverts (STX-2 and STX-3). STX-1 is a bridge located on an unnamed Class II intermittent watercourse that was replaced in 2008 as part of a state-funded fisheries restoration project and is in good condition. STX-2 is an existing 48-inch diameter plastic culvert located on a Class II intermittent watercourse that is proposed to be upgraded to a 72-inch diameter arched culvert to sufficiently pass the expected 100-year streamflow event and associated debris. STX-3 is an existing 36-inch diameter plastic culvert located on a Class III ephemeral watercourse that is proposed to be upgraded to a 60-inch diameter culvert to sufficiently pass the expected 100-year streamflow event and associated debris. The California Department of Fish and Wildlife (CDFW) has been notified of the two proposed stream crossing upgrades (STX-2 and STX-3) and have authorized the replacements under executed Streambed Alteration Agreement No. EPIMS-HUM-18009-R1C (Appendix 2).

The Mattole River is not state or federally designated under the Wild and Scenic Rivers Act (National Wild and Scenic Rivers System, 2021). The first 1.5 miles of the Mattole River Estuary are proposed to be designated as Wild and Scenic but have not yet been designated as of the date of this document.

The Mattole River is listed as an “Impaired” waterbody per section 303(d) of the Clean Water Act, for excessive sediment and high temperatures. Listing a waterbody as impaired for a particular constituent or stressor requires the development of a Total Maximum Daily Load (TMDL), which is a pollution control plan for the waterbody and the associated constituent or stressor. The TMDL identifies the quantity of the constituent that can be safely assimilated by a waterbody without violating water quality standards. A TMDL for sediment and temperature in the Mattole River was adopted by the U.S. Environmental Protection Agency (EPA) on December 30, 2002. The Mattole River Sediment TMDL was included in Resolution R1-2004-0087, Total Maximum Daily Load Implementation Policy for Sediment Impaired Receiving Waters in the North Coast Region, adopted by the North Coast Regional Water Quality Control Board in November 2004. The TMDL includes numeric targets, source analysis, and sediment loading rates within the watershed (EPA 2002). The primary purpose of the TMDLs for the Mattole River is to ensure that beneficial uses of related to the cold water fishery in the Mattole River watershed.

The Proposed Project is located in the Mattole River Valley Groundwater Basin (Number 1-28). The Mattole River Valley Groundwater Basin encompasses approximately 5 square miles. The Mattole River Valley groundwater Basin is not one of the 517 prioritized groundwater basins and sub-basins in California by the California Department of Water Resources (DWR) as part of the Sustainable Groundwater Management Act.

No portion of the property is located within a FEMA Flood Zone or dam failure inundation zone.

Cisco Farms, Inc., enrolled with the State Water Resources Control Board (SWRCB) for Tier 1, Low Risk coverage in March of 2021 under the Cannabis General Order (WDID 1_12CC428193). Prior to commencing operations onsite, a Site Management Plan will be developed utilizing Best Practicable Treatment or Control (BPTC) measures in accordance with the SWRCB's recommendations in the Cannabis General Order and Policy. Additional filings, monitoring, and furnishing of supporting documents once the Project is fully approved and developed would be coordinated with the SWRCB. The drainage and erosion control measures described below are required components of the SMP.

The SMP would include erosion prevention and sediment control BPTC Measures designed to prevent, contain, and reduce sources of sediment. The SMP also includes corrective actions to reduce sediment delivery and prevent erosion. Two existing culverted stream crossings are proposed to be upgraded to ensure passage of the 100-year streamflow event. Ongoing BPTC Measures would be implemented throughout the life of the project, including proper storage of all liquid materials in secondary containment, safe storage of site refuse, site winterization activities, and ongoing monitoring of the site. All hazardous materials, including pesticides, fertilizers, soils, spoils piles, and cultivation waste, would be properly stored outside of riparian setbacks to protect water quality.

Analysis

- a) **Finding:** The project would not violate any water quality standards or waste discharge requirements. *Less than significant impact.*

Discussion: Construction of the Proposed Project would include grading, storage and use of construction materials, and the operation of heavy equipment. Until construction at the site is complete, soil and pavement particulate may become entrained in stormwater resulting in sediment being discharged from the site. In addition, stormwater discharge may include debris, particulate, and petroleum hydrocarbons as a result of improper storage of construction materials, improper disposal of construction wastes, discharges resulting from construction dewatering activities, and spilled petroleum products. No construction would occur in or within 150 feet of Class I (perennial) watercourses, 100 feet of Class II (intermittent) watercourses, or 50 feet of Class III (ephemeral) watercourses. No wetlands were identified onsite.

There is an existing unpermitted septic system that serves the existing residence, and a new septic system is proposed to accompany the processing facility as part of the Proposed Project. A Septic Feasibility Study was conducted by OurEvolution Engineering (August 2021), which analyzed the soils and found that the proposed location of the new septic system (Appendix 1 – Site Maps) would be adequate to support a safe and effective onsite wastewater treatment system (Appendix 2). The proposed septic system would be designed and reviewed by a professional engineer with an appropriately sized leach field and septic tank prior to approval from the Humboldt County Department of Environmental Health. Portable toilets and handwashing facilities would be provided onsite and serviced by a licensed provider prior to construction of the processing building.

Irrigation of plants would of hand watering and drip irrigation and conservation and containment measures to prevent excess water use. Vegetated buffers between the cultivation activities and the riparian areas would be maintained.

With the implementation of operating restrictions, and compliance with SWRCB Construction General Permit and Cannabis General Order, the Proposed Project would not violate any water quality standards or waste discharge requirements. Impacts would be less than significant, and no mitigation would be necessary.

- b) Finding: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. *Less than significant impact.*

Discussion: Water for irrigation for the Proposed Project, including cultivation and nursery activities, would be provided exclusively by rainwater catchment and 2,850,000 gallons of associated storage (a 2.65-million gallon pond and thirty-eight (38) proposed 5,000-gallon water tanks) and would total approximately 2,154,095 gallons, including 1,807,276 gallons for mature plant cultivation and 346,819 gallons for nursery activities (Table 2). See the Cultivation and Operations Plan in Appendix 1 for further details.

Water for irrigation would be served exclusively by rainwater. The total rainwater collection potential, including surface area of the pond, greenhouses, dry buildings, and the proposed processing and nursery buildings, during an average rainfall year of 73.93 inches is approximately 8,301,376 gallons (Table 3). During drought years, the total collection potential varies from 3,058,697 gallons to 3,974,959 gallons, depending on the dataset used to estimate the lowest rainfall on record (Table 3 – Project Description), which is sufficient to meet the proposed demand, even during the minimum precipitation year on record of 27.24 inches and accounting for pond evaporation.

Non-irrigation water for domestic uses, including drinking, plumbing, and processing (e.g., handwashing, surface and tool cleaning, and toilet flushing) would be sourced from a proposed on-site well. Demand for non-irrigation water would total approximately 111,709 gallons annually, including 10,429 gallons for processing activities and 101,280 gallons for water use associated with the farmworker housing.

The proposed well would be drilled on APN 104-232-005, on the border of the Mattole River Valley Groundwater Basin (Figure 10, see also Site Map in Appendix 1). The Mattole River Valley Groundwater Basin (#1-28) extends from the Mouth of the Mattole River at the Pacific Ocean inland to the alluvial plains of the mainstem and north fork Mattole River (DWR, 2004), with a mapped surface area of 3,150 acres. The basin is bounded to the northwest by tertiary marine sedimentary rocks of the Wildcat series, and to the south and east by undifferentiated marine Cretaceous deposits of greywacke sandstone and shale (DWR, 2004). Reported groundwater extraction for agricultural use is 140 acre-feet (AF), and for industrial and municipal use is 7 AF, for a total of 147 AF annual groundwater demand. DWR (2004) reports deep percolation of applied water, implied as irrigation return flows, to be 87 AF.

The demand from the proposed well as a result of this project would be approximately 111,709 gallons, or 0.434 AF, for non-irrigation uses. This represents approximately 0.3% of the 140 AF of agricultural groundwater demand and only 0.29% of overall groundwater demand in the Mattole River Valley Groundwater Basin (DWR, 2004). When drilled, the proposed use for groundwater would be consistent with uses in the area and would represent only a small fraction of groundwater used in the area. Therefore, the project would not substantially decrease groundwater supplies.

The Mattole River Valley Groundwater Basin has not been identified by the California Department of Water Resources (DWR) as a critically overdrafted basin. Critically overdrafted is defined by DWR as, “A basin subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts.” In addition, as part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, DWR created the CASGEM Groundwater Basin Prioritization statewide ranking system to prioritize California groundwater basins in order to help identify, evaluate, and determine the need for additional groundwater level monitoring. California’s groundwater basins were classified into one of four categories high-, medium-, low-, or very low-priority. The Mattole River Valley was ranked as a very low-priority basin by the CASGEM ranking system (DWR, 2021).

If the well is unable to be used for domestic water for any reason, the applicant would add up to an additional 70,000 additional rainwater catchment storage tanks in the area proposed for storage tanks. This amount is approximately the amount that would be needed for employee and processing usage during the typical dry months of May – October.

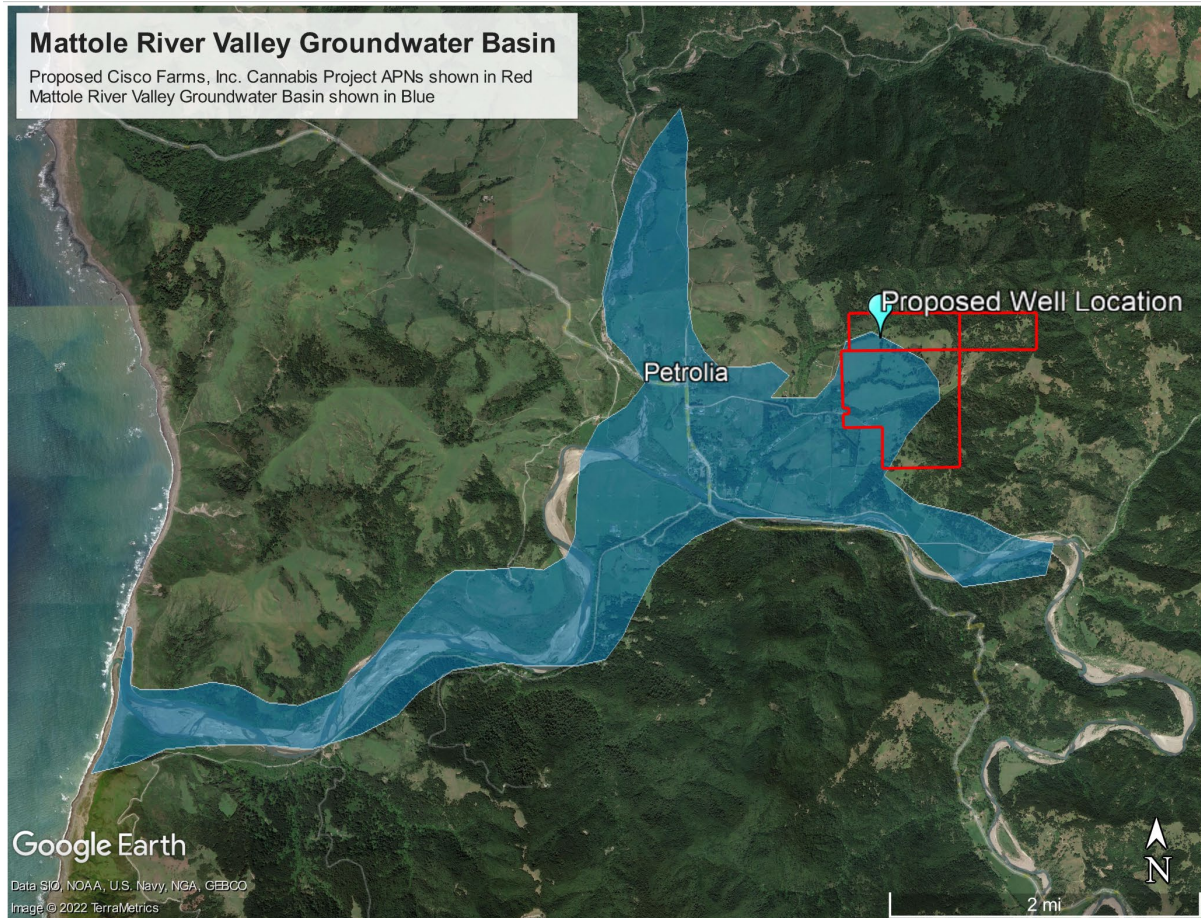


Figure 10: Mattole River Valley Groundwater Basin, Proposed Project APNs, and Proposed Well Location (Source: Google Earth, 2022)

The Proposed Project proposes to capture and store rainwater for irrigation use that may have otherwise recharged the groundwater basin. Total irrigation demand from rainwater is approximately 2,154,095 gallons. Additionally, it is estimated that approximately 677,929 gallons of collected rainwater would evaporate from the pond during the hotter, dryer summer and fall months. Combining irrigation demand and projected evaporation, the total rainwater demand from the Proposed Project would be 2,832,024 gallons or 8.7 AF. Approximately 73.9 inches and 27.2 inches of rain would fall across the 517-acre property during an average and dry year, respectively. This equates to 3,184 AF and 1,172 AF, respectively. The 8.7 AF of total demand of rainwater associated with the Proposed Project (including evaporation) represents only a fraction - approximately 0.27% and 0.75% - of total rainfall that falls on the property during an average and dry rainfall year, respectively.

Therefore, the Proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Impacts would be less than significant, and no mitigation would be necessary.

- c. i) **Finding:** The project would not 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 result in substantial erosion or siltation on- or off- site. *Less than significant impact.*

Discussion: No alterations or re-routings of watercourses is proposed. Three (3) stream crossings exist onsite, including one bridge (STX-1) and two culverted crossings (STX-2 & STX-3), which would both be upgraded and improved as a result of the Proposed Project. none of which would be negatively impacted or altered by the proposed project. STX-2 is an existing 48-inch diameter plastic culvert located on a Class II intermittent watercourse that is proposed to be upgraded to a 72-inch diameter arched culvert to sufficiently pass the expected 100-year streamflow event and associated debris. STX-3 is an existing 36-inch diameter plastic culvert located on a Class III ephemeral watercourse that is proposed to be upgraded to a 60-inch diameter culvert to sufficiently pass the expected 100-year streamflow event and associated debris. The improvement of two (2) stream crossings has been approved by the CDFW in the executed SAA.

With the implementation of operating restrictions, and compliance with SWRCB Construction General Permit and Cannabis General Order, the Proposed Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Rather, impacts to onsite stream crossings would be positive, as they would be improved to pass flows from the 100-year storm event. The applicant would follow all stream crossing upgrade requirements as outlined in the executed SAA by the CDFW. Impacts would be less than significant, and no mitigation would be necessary.

- c. ii) **Finding:** The project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. *Less than significant impact.*

Discussion: The Proposed Project would increase the amount of impermeable surface within the project site by approximately 178,360 sq. ft. (approximately 4 acres), through construction of greenhouses, drying buildings, the processing building, and the modular farmworker housing units. The three (3) acres of full-sun outdoor cultivation was not included in this calculation due to retained permeability. The project site is located within the Lower Mattole River Watershed HUC-12 watershed, which has a contributing acreage of 38,550 acres. The approximately 4 acres of impermeable surface created by the project represents 0.7% of the total parcel size (517 acres) and approximately 0.01% of the Lower Mattole River Watershed drainage area. Rainwater from some of the proposed impervious surface areas would be plumbed to the 2.65-million gallon rainwater catchment pond and tanks and stored for irrigation use. Further, no surface runoff from irrigation would be generated from the cultivation activities. Irrigation of plants would consist of hand watering and drip irrigation and conservation and containment measures to prevent excess water use. The increase in runoff due to the new impermeable surfaces would be minimal.

With the implementation of operating restrictions, and compliance with SWRCB Construction General Permit and Cannabis General Order, the Proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. The project impacts would be less than significant impact.

- c. iii) **Finding:** The project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. *Less than significant impact.*

Discussion: The site is not connected to a municipal storm drainage system. The three (3) onsite stream crossings would either be unaffected or improved by approval of the Proposed Project (see discussion in c)i, above). The Proposed Project would increase the amount of impermeable surface within the project site by 178,360 sq. ft. (approximately 4 acres), or 0.7% of the total parcel size and 0.01% of the Lower Mattole River

contributing drainage area (see discussion in c)ii, above). Rainwater from some of the proposed impervious surface areas would be plumbed to the 2.65-million-gallon rainwater catchment pond and tanks and stored for irrigation use. Further, no surface runoff from irrigation would be generated from the cultivation activities. Irrigation of plants would consist of hand watering and drip irrigation and conservation and containment measures to prevent excess water use. The increase in runoff due to the new impermeable surfaces would be minimal.

Site operations would conform to Best Practicable Treatment or Control Measures from the SWRCB Cannabis Policy and General Order to reduce erosion and sedimentation onsite. With the implementation of operating restrictions, and compliance with SWRCB Construction General Permit and Cannabis General Order, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation would be necessary.

- c. iv) Finding: The project would not impede or redirect flood flows. *No impact.*

Discussion: No portion of the property or Proposed Project is not located within a FEMA Flood zone. Therefore, the project would not impede or redirect flood flows.

- d) Finding: The project would not in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. *No impact.*

Discussion: The Proposed Project is not in an area that is at risk from flood hazard, seiche, or tsunami. The proposed 2.65-million-gallon pond would be designed by an engineer and approved by the Humboldt County Building Department prior to construction. An engineered grading permit for the proposed pond was submitted to the Humboldt County Planning and Building Department on March 15th, 2021 (BLD-2021-53539). Permit BLD-2021-53539 is ready to issue once the Conditional Use Permit for the Proposed Project is approved. The project is not located near a large body of water capable of producing a seiche and is not located near the coast in a tsunami inundation area. Therefore, the Proposed Project would not result in inundation by flood hazard, seiche or tsunami.

The Proposed Project includes construction of a 2.65-million-gallon pond. The pond would be designed by a professional engineer and a grading permit would be approved by the Humboldt County Building Department prior to construction. No other levee or dam construction is associated with the Proposed Project. As noted previously, the Proposed Project would not be located within a 100-year flood zone and would not expose people or structures to any other kind of flooding event. The Proposed Project site is not located within a dam failure inundation area according to the Humboldt County Web GIS system. Therefore, the Proposed Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

- e) Finding: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. *Less than significant impact.*

Discussion: Mattole River Valley Groundwater Basin is not subject to a Sustainable Groundwater Management Plan. There are no conditions associated with the Proposed Project that would result in a conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan beyond what is described in the responses to subsections a) – d) above. The project includes compliance with the State Water Resources Control Board (SWRCB) Construction General Permit (CGP) and is enrolled with the State Water Resources Control Board (SWRCB) for coverage under Order No. WQ 2019-0001-DWQ (General Order – WDID 1_12CC428193). Therefore, the Proposed Project would not otherwise substantially degrade water quality or conflict with or obstruct a water quality control plan or sustainable groundwater management plan.

Mitigation Measures

None.

3.2.11. LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with the jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The Proposed Project is located off of Chambers Road, approximately one mile east of the community of Petrolia in the unincorporated area of Humboldt County. The subject parcel has historically been used for agriculture, livestock, grazing, and residential uses. The property is zoned Agriculture Exclusive (AE) and has a General Plan Land Use Designation of Agricultural Grazing (AG) (Figure 11, Figure 12). Surrounding land uses include agriculture, livestock/grazing, timberland, and rural residential uses. Twelve (12) commercial cannabis projects are located within one mile of the Proposed Project area, per the County’s Accela website (2022).

Analysis

- a) Finding: The project would not physically divide an established community. *No Impact.*

Discussion: The Proposed Project would not substantially alter existing land uses and all work would be completed within existing Agriculture Exclusive (AE) zoning (Figure 11). No residences or businesses would be demolished as part of the Proposed Project. The Proposed Project would continue to conduct agricultural activities on the project site. No activities are proposed that would physically divide an established community. No impact would occur as a result of the Proposed Project and no mitigation is required.

- b) Finding: The project would not 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. *No Impact.*

Discussion: The Proposed Project site is zoned Agriculture Exclusive (AE). The Proposed Project would not result in changes to existing land use, zoning, or specific plans in Humboldt County. The Proposed Project would not conflict with any goals, policies, or objectives in the Humboldt County General Plan intended to mitigate potential environmental impacts. Land uses and zoning would remain unchanged.

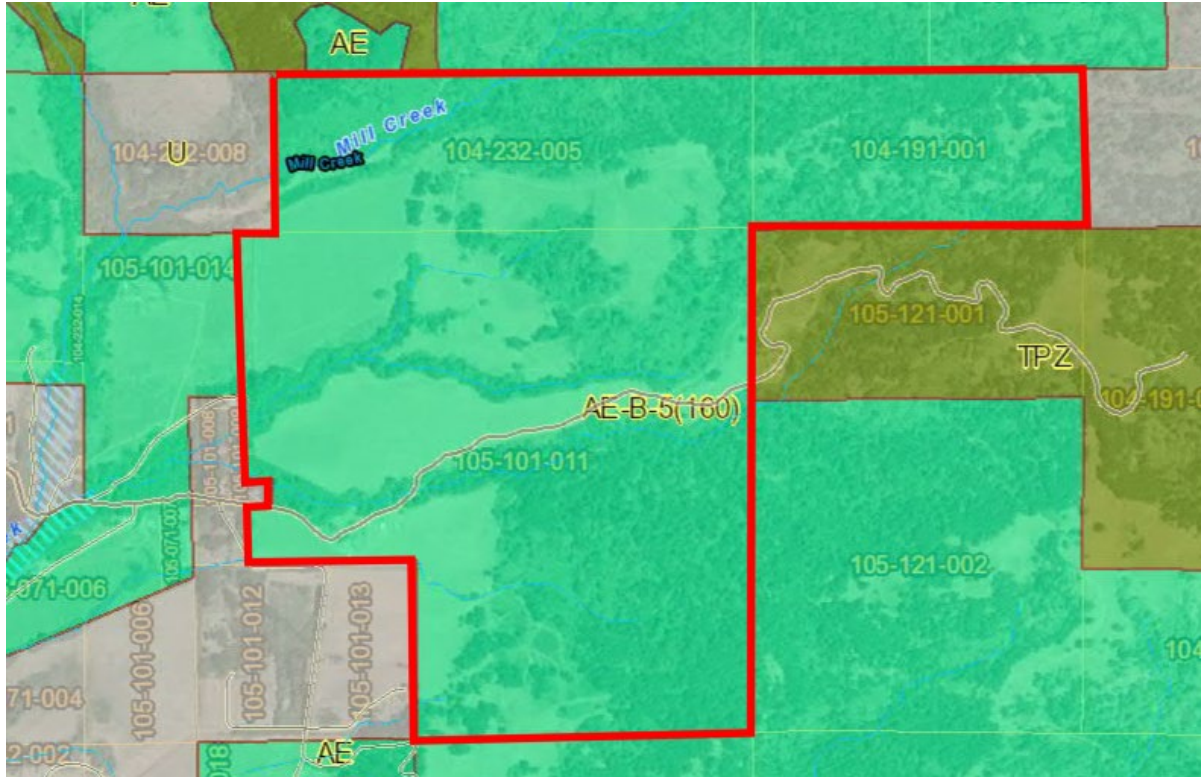


Figure 11: Cisco Farms, Inc. Zoning (Source: Humboldt Web GIS, 2022)

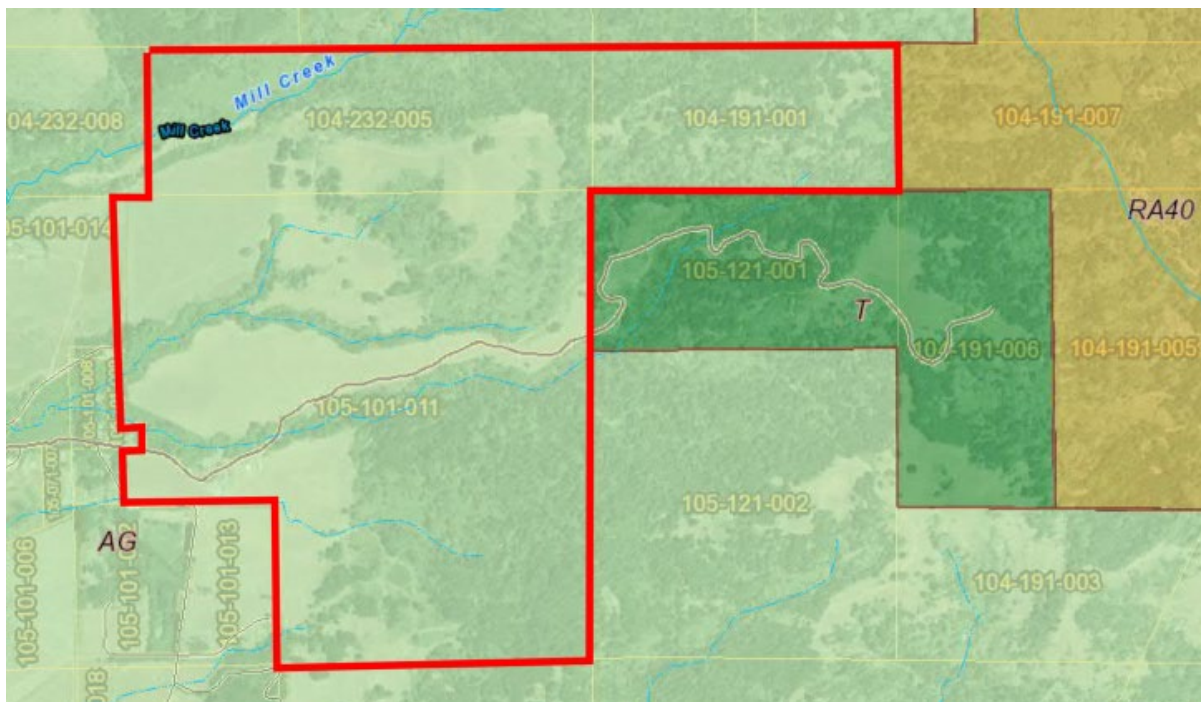


Figure 12: Cisco Farms, Inc. General Plan Land Use Designation (Source: Humboldt County Web GIS, 2022)

The agricultural use associated with the Proposed Project would be consistent with the allowable land uses under the Humboldt County General Plan and Zoning Ordinance. The CCLUO identified AE-zoned parcels as sites where cultivation, processing activities, and nurseries projects of this size and scope would be allowed, subject to the issuance of discretionary permits. In addition, the Proposed Project would otherwise not conflict with any applicable goals, objectives, and policies of the Humboldt County General Plan and Zoning Ordinance. As discussed throughout this document, in all instances where potentially significant impacts have been identified, mitigation is provided to reduce each impact to less than significant levels.

The analysis contained in this document addressed the potential conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect including, but not limited to, Humboldt County General Plan and Land Use Ordinance, Humboldt County Draft Climate Action Plan (2012), HCAOG 20-Year Regional Transportation Plan (2017 Update), HCAOG Regional Bicycle Plan Update (2018), and NCUQMD Particulate Matter (PM10) Draft Attainment Plan (1995).

Therefore, based on the analysis conducted in this document, it was determined that the project was not in conflict with any adopted land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur as a result of the Proposed Project. No mitigation is required.

Mitigation Measures

None.

3.2.12. MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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 residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

According to the Humboldt County General Plan, mineral production within the county is limited to sand, gravel, and rock extraction. Gravel bars and deposits from the large stream and flood plains supply most of the gravel needs of the County. Since costs for these materials are mostly associated with transportation, operations are usually located close to rural and urban development areas and used locally. Production of sand, gravel, and rock are essential for the continued well-being of the County. They are the basis for much of the construction materials for roads, concrete, streambank protection, erosion control, septic systems, and passive solar projects (Humboldt County General Plan, 2017).

No historical mining is known to have occurred on the property. Within the Proposed Project area, there is no land classified as IR (Industrial Resource) which designates areas for resource-related industrial processing including mineral products. Additionally, there is no surrounding land classified under this designation. No parcels under the Surface Mining and Reclamation Act are located within the project vicinity. Land uses surrounding the parcel are comprised of agriculture, livestock/grazing timber, and scattered rural residences. Surrounding zoning designations adjacent to the property are Agriculture Exclusive (AE), Unclassified (U), and Timberland Production Zone (TPZ). Surrounding General Plan Land Use Designations consist of Agricultural General and Timberland (T).

Analysis

- a) **Finding:** The project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. *No impact.*

Discussion: The Proposed Project site does not include any lands that are classified as MRZ-2 or any known locally important mineral resources. The Proposed Project is not within or adjacent to any mining operations.

The Proposed Project is a cultivation operation. Implementation of the Proposed Project would not result in the loss of availability of a known mineral resource, and no impact would occur.

- b) Finding: The Proposed Project will not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. *No impact.*

Discussion: There are no known mineral deposits of significance on or near the Proposed Project site. Therefore, implementation of the Proposed Project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

Mitigation Measures

None.

3.2.13. NOISE

Would the Project result in:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use air- port, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The Proposed Project is located off of Chambers Road near the community of Petrolia. Land uses surrounding the parcel are comprised of agriculture, timber, and rural residences. Noise on the site would increase with the approval of commercial operations onsite. Noise levels during construction activities would increase temporarily from equipment (e.g., backhoe or bulldozer), although minimal grading and site preparation are necessary due to the relatively flat topography of the site. Noise from operational activities would increase at the start of each cultivation season with equipment used for annual site preparation. Ongoing operational activities, including fans, vehicular traffic, delivery truck traffic, employee noise, and backup generators (if used) would also produce noise.

The noise standards in the Humboldt County General Plan are based on the Community Noise Equivalent Level (CNEL), which is a measure that describes average noise exposure over a period of time (Humboldt County General Plan, 2017). Because communities are more sensitive to impacts from nighttime noise, noise descriptors must specifically take this time period into account. Common measures include the CNEL and the Day-Night Average Level (Ldn). Both reflect noise exposure over an average day, with greater weight given to noise occurring during the evening and night. The two descriptors are roughly equivalent but CNEL is used in this Plan for regulating cumulative noise exposure over a 24-hour period.

A standard construction wood frame house reduces noise transmission by 15 dB. Since interior noise levels for residences are not to exceed 45 dB, the maximum exterior noise level for residences is 60 dB without requiring additional insulation. In areas where CNEL noise levels exceed 60 dB, the need for additional noise insulation

would vary depending on the land use designation; adjacent uses; distance-to-noise source; and intervening topography, vegetation, and other buffers. The building code provides standards for meeting noise insulation requirements. (Humboldt County, 2017).

According to Table 13-C (Land Use/Noise Compatibility Standards) in the Humboldt County General Plan, normally acceptable noise levels go up to 91+ dB in an Agriculture land use category. Per Policy N-S1, the Land Use/Noise Compatibility Standards (Table 13-C) shall be used as a guide to ensure compatibility of land uses. Development may occur in areas identified as “normally unacceptable” if mitigation measures can reduce indoor noise levels to “Maximum Interior Noise Levels” and outdoor noise levels to the maximum “Normally Acceptable” value for the given Land Use Category.

The CCLUO includes Performance Standards for Noise at cultivation sites, requiring noise from new cultivation activities to not increase decibels of continuous noise above existing ambient noise levels by three (3) decibels at any property line (CCLUO, 2018). Ambient noise onsite was measured at 30 dBA to 58 dBA (Appendix 1 - Cultivation and Operations Plan).

Analysis

- a) **Finding:** The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. *Less than significant impact.*

Discussion: The Proposed Project proposes the cultivation and processing of cannabis in a designated agriculture area. Potential noise sources associated with the Proposed Project would include permanent operational noises, which include greenhouses and accessory facilities, employee vehicle traffic, delivery truck traffic, equipment use, and back-up generators during power outages, as well as temporary noises, including noise from construction.

Per Humboldt County General Plan Chapter 13, noise impacts for new development projects should be based on a comparison of the noise compatibility standards provided Table 13-C of the General Plan. The Community Noise Equivalent Level (CNEL) is used as a measure that describes average noise exposure over a period of time. CNEL is used in the General Plan for regulating cumulative noise exposure over a 24-hour period. Clearly acceptable CNEL levels, per Table 13-C of the General Plan, for residential land uses are CNEL of 50 dB. Clearly acceptable noise exposure is defined in the General Plan as “*the noise exposure is such that the activities associated with the land use may be carried out with essentially no interference. (Residential areas: both indoor and outdoor noise environments are pleasant).*” The maximum short-term day (6:00 AM to 10:00 PM) noise standard for AG land uses is 80 dBA. The maximum short-term night (10:00 PM to 6:00 AM) noise standard for AG land uses is 70 dBA (Figure 13).

Activities associated with cultivation in the greenhouses (watering, transplanting, and harvesting) would generally occur during daylight hours. All other activities, such as processing, would typically occur no earlier than 8 AM and extend no later than 8 PM. Noise sources that would be generated by the operation of this project would include fans in the greenhouses, employee vehicle traffic, delivery truck traffic, equipment use, and the back-up generators during power outages. Fans and generators, when running, would be the greatest source of noise. Fans would be selected based on ability to meet or exceed the 60 dB requirement at the nearest property line. Variable speed dials for fans may be utilized to ensure that the required noise thresholds are met. HVAC units and some filter equipment would be installed to minimize odors and dust that may result in some minor noise on the exterior of the buildings. Noise from generator use would be temporary in nature.

SHORT-TERM NOISE STANDARDS (Lmax)		
Zoning Classification	Day (maximum)	Night (maximum)
	6:00 a.m. to 10:00 p.m.	10:00 p.m. to 6:00 a.m.
	dba	dba
MG, MC, AE, TPZ, TC, AG, FP, FR, MH	80	70
CN, MB, ML, RRA, CG, CR, C-1, C-2, C-3,	75	65
RM, R-3, R-4	65	60
RS, R-1, R-2, NR	65	60

Figure 13: Humboldt County General Plan Short-Term Noise Standards for Zoning Classifications (Source: Humboldt County General Plan Noise Element, 2017)

Given the type of use (i.e., cannabis facility) and size of the project, long-term operation of the Proposed Project is not expected to result in a significant temporary or periodic increase in ambient noise levels exceeding the Humboldt County General Plan Noise Element Standards. Many of the Proposed Project activities would take place within the existing and new buildings which would significantly reduce noise levels.

To ensure that the Proposed Project has back-up power in the case of a power outage during long-term operation, generators would be kept onsite. In the event of generator use, to buffer noise levels generated by use of the back-up generators, generators would be housed in one of the accessory buildings. The use of generators would follow all guidelines set up by Humboldt County and the State of California.

Construction activities would result in a temporary increase in noise levels in the area. This noise increase would be short in duration and would occur during daytime hours. It is anticipated that construction would take up to approximately 10 weeks. Activities involved in construction would generate maximum noise levels, as indicated in Table 10, ranging from approximately 80 to 85 dB at a distance of 50 feet (Appendix 1 - Noise Source Assessment & Mitigation Plan, Cultivation and Operations Plan). Due to the size of the parcel (approximately 517 acres), surrounding topography, and distance to neighboring residences (587+ feet), temporary construction noise would likely be reduced beyond the boundaries of the site to acceptable levels.

Table 10. Construction Equipment Noise Levels (Source: Federal Highway Administration Construction Noise Handbook, 2006)

Type of Equipment	Maximum Noise Level (dB at 50 feet)
Dozer	85
Heavy Trucks	85
Backhoe	80
Pneumatic Tools	85

The Proposed Project would be conditioned to comply with the County’s noise regulations which would ensure that impacts from the Proposed Project would be less than significant. Since the Proposed Project would be located near existing agricultural uses and in a rural environment and on a parcel of greater than 500 acres, noise levels are anticipated to be less than significant. The Proposed Project would meet all Noise Performance Standards in the CCLUO to not increase noise levels greater than three (3) decibels over ambient. Therefore, the Proposed Project would not expose persons to or result in the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standard of other agencies.

- b) **Finding:** The Proposed Project will not expose persons to or generate excessive groundborne vibration or groundborne noise levels. *Less than significant impact.*

Discussion: Construction of the Proposed Project facilities would result in a temporary increase in noise levels in the area. Groundborne vibrations or groundborne noise levels would be short in duration and would occur during daytime hours. As previously mentioned, the distance to the nearest residence is located approximately 587 feet from the nearest cultivation facility. Given the distance of the nearest sensitive noise receptor and the temporary nature of construction, impacts from construction activities are considered less than significant.

Long-term operation of the Proposed Project facilities would not involve the regular use of heavy machinery or ground disturbing activities that would result in excessive groundborne vibration or groundborne noise levels. An agricultural tiller may be used at the beginning of the cultivation season, consistent with historic agricultural uses on the property and surrounding properties. Therefore, the Proposed Project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. The project impacts would be less than significant, and no mitigation would be necessary.

- c) **Finding:** The project would not, for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels. *No impact.*

Discussion: There are no private airstrips in the project area. Therefore, the Proposed Project would not be within the vicinity of a private airstrip, nor result in a safety hazard for people residing or working in the project area and the Proposed Project would not expose people residing or working in the project area to excessive noise levels. The project site is not located within two miles of a public airport or public use airport. The closest airport is the Rohnerville Airport, located over 17 miles from the Proposed Project area. The Proposed Project would not expose workers working or residing on the project site to excessive noise levels from a private airstrip. No impacts would occur, and no mitigation would be necessary.

Mitigation Measures

None.

3.2.14. POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing else- where?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

Humboldt County is a rural county with a large land area and low population density. The 2020 Census reported the county’s population to be 136,463, which represents an increase of 1,840 over the population reported in the 2010 census (US Census Bureau, 2022). The Proposed Project is one mile east of the community of Petrolia in the unincorporated area of Humboldt County. Petrolia has an estimated population of approximately 1,000 people (Humboldt County Website, 2022).

Analysis

- a) **Finding:** The project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). *Less than significant impact.*

Discussion: The Proposed Project would provide employment for approximately twelve (12) full-time employees during the cultivation season from March to November and up to 22 additional employees/contract laborers during peak seasonal events, such as harvesting and planting, for a total of 34 employees. The Proposed Project includes farmworker housing for eight (8) full-time employees.

Growth inducing impacts are generally caused by projects that have a direct or indirect effect on economic growth, population growth, or when the project taxes community service facilities which require upgrades beyond the existing remaining capacity. Providing housing for eight (8) employees, approximately 0.4% of Petrolia’s estimated population, is not likely to substantially increase population growth in the area. Therefore, the Proposed Project would not induce substantial population growth in the area either directly or indirectly. Impacts would be less than significant in this regard and no mitigation measures would be required.

- b) **Finding:** The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. *No Impact.*

Discussion: The Proposed Project would not displace people or existing housing. The existing residence on the Proposed Project site is proposed to remain and would provide housing for a site caretaker. Therefore, the Proposed Project would not displace a substantial number of existing housing, necessitating the construction of

replacement housing elsewhere. No impacts would occur in this regard and no mitigation measures would be required.

Mitigation Measures

None.

3.2.15. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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 following public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Fire protection within Humboldt County is provided by local districts and cities (often considered special districts). Areas outside of these special districts and cities are typically served by volunteer fire companies. In addition, much of the County is serviced by the California Department of Forestry and Fire Protection (CalFire) and for the project site is provided by the Humboldt-Del Norte Fire Unit, located in Fortuna, California servicing 3.1 million acres between the Oregon border and Mendocino County (CalFire, 2007). The subject parcel is in a State Responsibility Area (SRA), and has areas of Very High, High, and Moderate Fire Hazard Severity ratings, though the entire Proposed Project area is located within a Moderate area (Humboldt Web GIS, 2022). Fire protection services for wildland fires are provided by CalFire. CalFire has responsibility for enforcement of Fire Safe Standards as required by Public Resources Code (PRC) 4290 and 4291. Also, CalFire is the primary command and control dispatch for most local agency fire districts and departments.

The Proposed Project is mostly located within the fire response jurisdiction of the Petrolia Fire Protection District, who would be the likely response team if a fire were to occur onsite. APN 104-232-005 is currently located in the Petrolia Fire Protection “Proposed Annexation Area” and would also be served by the Petrolia Volunteer Fire Department if there was an emergency (Humboldt County Web GIS, 2022). The Petrolia Fire Station is the nearest station to the project site, located approximately 2.4 road miles southwest of the project site (drive time of approximately 10-15 minutes).

The Humboldt County Sheriff’s Office is responsible for law enforcement in the unincorporated areas of the County including for the Proposed Project site. The Humboldt County Sheriff’s Office provides a variety of public safety services countywide (court and corrections services) and law enforcement services for the unincorporated areas of the County. The California Highway Patrol is responsible for enforcing traffic laws on roadways within the unincorporated areas and on state highways throughout the County. The Sheriff’s Office Operations Bureau is made up of seven units under the command of the Undersheriff. The most visible of these units is the Patrol Unit. Sheriff’s Deputies assigned to the Patrol Unit are responsible for responding to emergency calls for service, criminal investigations, and crime prevention through neighborhood and beat patrols. According to the Humboldt County General Plan Update Draft EIR, in the more rural areas of the County, like the project area, maximum response times may reach 50 minutes because of longer travel distances, varied topography, available resources, and the location of the Sheriff Deputy on patrol in relation to the incident (Humboldt County, 2017).

The nearest school to the project site is Mattole Unified School District, approximately 1 aerial mile west of the project.

The nearest park is located on the Mattole Unified School District campus, approximately 1 aerial mile west of the project. The nearest mapped Public Lands are located 1.14 miles southwest of the project.

Police and law enforcement services for the project site are provided by the Humboldt County Sheriff's Department. The closest station is located in Fortuna, approximately 37 driving miles from the project and an approximately hour and fifteen-minute drive (Google Maps, 2022).

Analysis

- a) Finding: The project will not 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 for fire protection. *Less than significant impact.*

Discussion: During peak operations, the Proposed Project would provide employment for approximately twelve (12) full-time persons and up to 22 contract laborers during peak seasonal events. This would not significantly increase the population in the unincorporated area near Petrolia area as all employees already live and work in Humboldt County, and most would live in the Petrolia area.

The Proposed Project would be required to comply with the Humboldt County Fire Safe Ordinance 1952, which the California Board of Forestry and Fire Protection has accepted as functionally equivalent to PRC 4290. The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signing of streets and buildings, minimum water supply requirements, and set-back distances for maintaining defensible space. The improvement plans for the Proposed Project would be reviewed to verify compliance with the County's Fire Safe Ordinance.

Due to the nature of the proposed cannabis uses and required compliance with fire code requirements, it is not anticipated that the project would result in a significant increase in the number of calls-for-service to which the Petrolia Volunteer Fire District responds. As such, the project would not result in the need for new or physically altered fire protection facilities. Therefore, impacts to fire protection services from the Proposed Project are considered less than significant.

- b) Finding: The project will not 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 for police protection. *Less than significant impact.*

Discussion: Due to the nature of the Proposed Project, there is the potential for security to be an issue and place a greater demand on law enforcement services provided by the County Sheriff's Department. All commercial cannabis facilities would be accessed from a driveway off of Chambers Road, behind a locked gate, and would be securely locked while not staffed or in use. Security lighting would be installed across the property, and a fence would be constructed to surround the Proposed Project area. Implementation of the security plan measures would minimize impacts on local law enforcement. As such, the Proposed Project would not result in the need for new or physically altered law enforcement facilities. Therefore, impacts to law enforcement services from the Proposed Project are considered less than significant.

- c)- e) Finding: The project will not 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 schools, parks, or other public facilities including public health services and library services. *Less than significant impact.*

Discussion: The Proposed Project would not substantially increase the population in the Petrolia area and would thus not create a demand for new schools, housing, parks, libraries, or public health services. Impacts would be less than significant.

Mitigation Measures

None.

3.2.16. RECREATION

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

See Section 3.2.15 Public Services for a discussion of parks and recreational resources in the region.

Analysis

- a) **Finding:** The project would not 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. *No impact.*

Discussion: The Proposed Project would not include new residences or features that would attract new residents or increase demand on parks and recreational trail systems. The Proposed Project would not directly induce population growth or otherwise result in an increased demand on existing recreational facilities. The Proposed Project would not provide direct access to or increase the use of recreational facilities in the region. No impact would occur in this regard and no mitigation measures would be required.

- b) **Finding:** The project would not include recreational facilities or require the expansion of recreational facilities which might have an adverse effect on the environment. *No impact.*

Discussion: The Proposed Project would not include construction of recreational facilities. The Proposed Project would not directly induce population growth or otherwise result in an increased demand on existing recreational facilities that would require the construction or expansion of recreational facilities. No impact would occur in this regard and no mitigation measures would be required.

Mitigation Measures

None.

3.2.17. TRANSPORTATION

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project site is approximately 517 acres in size and is located off of Chambers Road in a rural area of Humboldt County, approximately 1 mile east of the community of Petrolia. The site is located approximately 30 driving miles from Ferndale, 47 driving miles from Garberville, and 50 driving miles from Eureka. The parcel is utilized for residential and agricultural/livestock purposes.

To reach the site from Ferndale, turn right on Bluff St./Ocean Ave at the south end of town and turn left onto Wildcat Road toward Petrolia. Continue for approximately 30 miles. Once in Petrolia, follow the main road (Front Street) through town and take a right onto Mattole Road. In 0.2 miles, take a left onto Chambers Road. The project driveway is located approximately 1.1 miles from the intersection with Mattole Road (Appendix 1 - Cultivation and Operations Plan, 2021).

A Road Evaluation was conducted for the project by Our Evolution Engineering (2021 – Appendix 2). Access to the site is from Chambers Road, a paved, county-maintained road developed to the Category 4 Standard from the intersection of Mattole Road to the edge of the Property Boundary (Appendix 1 - Cultivation and Operations Plan, 2021; Appendix 2 - Road Evaluation, 2021). Chambers Road is used to access private residences along the road. Traffic data about Chambers Road was not readily available at the time of publication of this study.

Daily trips generated by the Proposed Project were estimated based on information on employee count, delivery truck trips, etc. from the Cultivation and Operations Plan (Appendix 1):

Construction: During construction, it is estimated that 5-15 personnel would be needed for construction activities. During this period, it is expected that construction personnel would make two (2) trips per day to the site, resulting in 10-30 trips per day. In addition, three (3) round trips per day from dump trucks or materials delivery trucks (based on 3 deliveries per day) are expected for a total of 8 to 13 round trips per

day during the construction period. Larger equipment would be mobilized once at the beginning of the project, and out at the end of the project.

Operation: At full build-out, the Proposed Project would result in an average of 8 daily trips by full-time employees and 44 trips by seasonal contract laborers during peak seasonal events and 0-2 daily truck trips. Thus, at peak season during full build out, the maximum daily vehicle trips would be approximately 54. The 54 trips per day corresponds to peak seasonal events, which is anticipated to be less than 3 months out of the year (Appendix 1 – Cultivation and Operations Plan).

The Humboldt County Association of Governments (HCAOG) designates bicycle transportation routes in the County. No designated routes are located on Chambers Road, Mattole Road, or near the project. The nearest designated bike route is Wildwood Avenue, located over 17 miles from the Proposed Project (HCAOG, 2022).

The Redwood Transit System provides public transportation services across Humboldt County. The community of Petrolia has no public transit system, and no public transit is available within 20 miles of the Proposed Project (Humboldt Transit Authority Website, 2022).

According to the Humboldt County General Plan Circulation Element, most facilities dedicated to pedestrians are located in urban areas of Humboldt County. There are no existing or proposed pedestrian facilities within the surrounding area of the project site (Humboldt County General Plan, 2017).

Analysis

- a) Finding: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. *Less than significant impact.*

Discussion: The project site would be accessed by Chambers Road, off of Mattole Road in the community of Petrolia. Construction traffic for the Proposed Project would result in a short-term increase in construction-related vehicle trips on US 101. Construction would result in vehicle trips by construction personnel and haul-truck trips for delivery and disposal of construction materials. Due to their short-term nature and consistency with other agricultural and cannabis projects in the area, construction activities would not result in substantial impacts to Chambers Road or Mattole Road.

Vehicle/truck traffic generated by long-term operation of the Proposed Project is estimated to generate up to 54 vehicle/truck trips per day during peak operations. These numbers take into consideration cannabis material and supplies being imported to the site and cannabis material being exported from the site. The Road Evaluation conducted by OurEvolution Engineering (Appendix 2), certifies that Chambers Road to the property boundary is developed to Category 4 road standards. No improvements were recommended in the Road Evaluation. Category 4 and Category 4 equivalent roads have been designated as roads that can support new agricultural cannabis projects (CCLUO, 2018). The applicant would maintain the intersection of Chambers Road and Mattole Road as required by the Humboldt County Department of Public Works.

There are no pedestrian, bicycle, or transit facilities located within 0.25 miles of the project site, which is consistent with the rural location and acceptable for the type of Proposed Project. Therefore, the Proposed Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Impacts would be less than significant and no mitigation would be required.

- b) Finding: The project would not conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b). *Less than significant impact.*

Discussion: There is no public transportation available near the Proposed Project, so the majority of employees would need to commute to the site. Four (4) modular farmworker housing units would offset some employee trips that would otherwise be coming from offsite. According to the 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA from the Governor’s Office of Planning and Research, “projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact”, barring inconsistency with a Sustainable Communities Strategy or general plan (OPR, 2018). Maximum daily trips during full operation would be 54, including employee and delivery traffic. Additionally, the Proposed Project would also serve as a Community Support Facility for the surrounding Petrolia and Honeydew areas, supporting nearby farms who could now utilize the processing and nursery services proposed in this project rather than traveling to a larger metropolitan area (e.g., Eureka or Garberville), subsequently reducing vehicle trips. Therefore, it is not expected for the Proposed Project to have a potentially significant level of vehicle miles traveled (VMT) and impacts related to CEQA Guidelines section 15064.3 subdivision (b) would be less than significant.

- c) Finding: The project would not substantially increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). *Less than significant impact.*

Discussion: The Proposed Project would use Chambers Road off of Mattole Road to access the project site. The Road Evaluation prepared by OurEvolution Engineering (Appendix 2) certifies that Chambers Road meets Category 4 standards. No hazardous geometric designs, such as sharp curves, were identified in the Road Evaluation.

In addition, the project site is currently used for agricultural purposes and would continue to be used for such purposes under a different agricultural commodity. Surrounding lands are used mainly for agricultural, residential, and timber purposes in the project area.

Therefore, the Proposed Project would not result in hazards due to incompatible uses and would not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersection) or incompatible uses (e.g. farm equipment). A less than significant impact would occur and no mitigation measures would be necessary.

- d) Finding: The project would not result in inadequate emergency access. *Less than significant impact.*

Discussion: The Proposed Project would use Chambers Road off of Mattole Road to access the project site. The Road Evaluation concluded that Chambers Road was developed to Category 4 standards and would therefore be adequate to serve the project (Appendix 2 - OurEvolution Engineering, 2021). The project design incorporates hammerhead turnarounds for emergency vehicles (Appendix 1 – Site Maps). As an operating standard, the applicant would be required to provide local emergency services with the gate code.

The Proposed Project would be required to comply with the Humboldt County Fire Safe Ordinance 1952, which the California Board of Forestry and Fire Protection has accepted as functionally equivalent to PRC 4290. The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signing of streets and buildings, minimum water supply requirements, and set-back distances for maintaining defensible space (CALFIRE, 2017). The improvement plans for the Proposed Project would be reviewed to verify compliance with the County’s Fire Safe Ordinance which would ensure that adequate access for emergency vehicles is provided. Therefore, the Proposed Project would not result in inadequate emergency access. Impacts would be less than significant, and no mitigation measures would be required.

Mitigation Measures

None.

3.2.18. TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<p>a) 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:</p> <ul style="list-style-type: none"> 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. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

The project site (APNs 105-101-011, 104-232-005, 104-191-001) is an approximately 517-acre parcel located off Chambers Road approximately 1.40 air miles east of Petrolia. The subject parcel is currently developed for domestic and agricultural purposes. Existing onsite structures include a residence and four (4) agricultural barns. The property has historically been used for agricultural purposes. The parcel is surrounded by agricultural land, timberland, rural residential homes, and other cannabis farms and agricultural activities. The project site was traditionally occupied by the Mattole (or Bettol) Tribe, also known as the “Kuneste” (William Rich and Associates, 2021).

As detailed in Section 3.2.5, a Cultural Resources Investigation Report was prepared for the property by William Rich, M.A., of William Rich and Associates in May 2021 (Appendix 2). The Cultural Resources Investigation Report included an examination of archaeological site records and survey reports in the area as identified by the Northwest Information Center (NWIC). No previous surveys in the vicinity have included the Proposed Project area. Four other surveys have included small areas within APNs 104-232-005 and 105-101-011 (S-039935, S-041906, S-041907, and S-043365), none of which found resources within the subject parcels

or within ¼ mile. One resource, Langdon’s Old Mill Berm (P-12-003796) is located ¼ mile west of the subject parcels.

The Proposed Project area was investigated for the presence of archaeological deposits, historic features, or other cultural resources. The report concluded that no historical resources, as defined in CEQA, Article 4, Section 15064.5 (a), were identified within the Proposed Project area or within a 600-foot buffer from the Proposed Project area (William Rich and Associates, 2021).

Analysis

a i-ii) **Finding:** The project will not cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code §5020.1(k). *Less than significant impact.*

Discussion: See analysis in Section 3.2.5, Cultural Resources. The Cultural Resources Investigation Report identified no historical resources as defined by Section 15064.5 within the Proposed Project area or property, nor were there any previous records of historical resources located on the subject property.

As required by AB 52, the County of Humboldt sent requests for formal consultation to the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, Big Lagoon Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, Karuk Tribe, Round Valley Reservation/ Covelo Indian Community, Tsnungwe Council, Wiyot Tribe, and Yurok Tribe. With the incorporation of proposed Mitigation Measure CUL-1, the impact would be less than significant.

Mitigation Measures

See Mitigation Measure CUL-1 in Section 3.2.5 – Cultural Resources.

3.2.19. UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The Proposed Project is for five (5) acres of commercial cannabis cultivation, 67,760 sq. ft. of commercial nursery, 3,000 sq. ft. of commercial processing activities, and ancillary activities. Four (4) modular farmworker residential structures totaling 1,280 sq. ft. are proposed as part of this project. Existing onsite development includes a ±1,900-sq. ft. residence and associated septic system, four (4) agricultural barns, fuel storage structures associated with agricultural activities, gravel and natural-surfaced roads, three (3) 500-gallon fuel tanks, a domestic spring diversion with associated water storage (2 x 3,600-gallon HDPE water tank and 3 x 1,000-gallon concrete water tanks), and two (2) livestock groundwater wells with associated well houses and water storage (1 x 5,000-gallon HDPE storage tank).

Portable toilets and handwashing facilities will be provided onsite and serviced by the provider until the proposed processing facility/residential housing units are constructed and the associated onsite wastewater treatment system is installed. The septic system would include an appropriately sized leach field and septic designed by a professional engineer. A preliminary Onsite Wastewater Treatment System Design has been prepared by OurEvolution Engineering, Inc. (Appendix 2, October 2021). The proposed leach field and septic tank would be located outside of riparian setbacks. The restroom within the proposed facility would be designed to meet Americans with Disabilities Act (ADA) standards of accessibility and would include a flushable toilet and a sink with cold and hot running water. The site is not connected to a municipal storm drainage system.

The Proposed Project would use photovoltaic panels and existing and proposed electrical service from Pacific Gas & Electric (PG&E) to power the facilities. The proposed solar system would have a capacity of 323 kW, estimated to produce 565,896 kWh annually (Appendix 1 – Sheet C2 of Site Maps), enough to up to 88% of total project demand. Existing electrical service includes a 200-amp residential service, and a 600-amp PG&E upgrade is also proposed (exact load calculations to be designed by an electrical engineer). Use of any on-site generators would be limited to backup and outage events and would follow all guidelines set by Humboldt County and the State of California.

Water for the Proposed Project would be provided by a proposed 2.65-million-gallon rainwater catchment pond and 38 5,000-gallon water storage tanks plumbed to catchment surfaces. The proposed onsite well would be utilized for employee use only (e.g., drinking water and residential use), estimated at approximately 111,709 gallons annually (Appendix 2 - Cultivation and Operations Plan). Drinking water may also be imported as needed.

Waste generated from the Proposed Project would either be composted onsite or properly disposed of. Refuse containers are proposed to be located near the cannabis facilities in wildlife-proof enclosed bins. The applicant estimates that approximately 8,000 lbs. of plant material solid waste, 280 lbs. of agricultural refuse waste, 150 lbs. of non-recyclable/compostable household refuse, and 350 lbs. of household recyclables would be generated annually. Plant material would be chipped and composted onsite, as feasible. Refuse and recycling would be taken to the Petrolia Humboldt Waste Management Authority site once every two weeks or as needed.

Analysis

- a) **Finding:** The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. *Less than significant impact.*

Discussion: The Proposed Project site is located within an unincorporated area of Humboldt County which does not have a public wastewater treatment system. Properties in this area function off of private systems. The existing residence on the project parcel has an onsite wastewater treatment system, including a septic tank and leach field. No changes, including relocation, are proposed to occur to the existing septic system.

The Proposed Project includes construction of a 3,000 sq. ft. commercial facility to serve as an employee break room and processing area. This building would include an ADA-compliant restroom and associated onsite wastewater treatment system, including a working flushable toilet, sink with hot and cold running water, shower, and an engineered septic tank and leach fields. The location for the leach fields has been vetted by Our Evolution Engineering (Appendix 2 - Septic Feasibility Study, 2021). The final septic system design would be reviewed for compliance with the requirements of the NCRWQCB and the Humboldt County Division of Environmental Health (DEH). Therefore, the Proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

The Proposed Project leach field and septic tank would be located outside the wetland and riparian setbacks (Appendix 1 – Site Maps). These impacts are considered to be part of the project’s construction phase and are evaluated throughout this document. Therefore, the Proposed Project would not result in significant environmental effects due to the construction of new wastewater treatment facilities or the expansion of existing facilities.

At full buildout of the Proposed Project, the site would use well water for domestic needs and rainwater catchment in a 2.65-million-gallon capacity rainwater catchment pond and plastic tanks for the irrigation of cannabis. An existing onsite well serves the onsite residence and a proposed new well would serve the proposed four (4) modular farmworker housing units.

The Proposed Project would increase the amount of impermeable surface within the project site by approximately 178,360 sq. ft. (approximately 4 acres), through construction of greenhouses, drying buildings, the processing building, and the modular farmworker housing units. The three (3) acres of full-sun outdoor cultivation was not included in this calculation due to retained permeability. The project site is located within the Lower Mattole River Watershed HUC-12 watershed, which has a contributing acreage of 38,550 acres. The approximately 4 acres of impermeable surface created by the project represents 0.7% of the total parcel size (517 acres) and approximately 0.01% of the Lower Mattole River Watershed drainage area. Rainwater from some of the proposed impervious surface areas would be plumbed to the 2.65-million-gallon rainwater catchment pond and tanks and stored for irrigation use. Any surface or stormwater runoff from the site is addressed in Section 3.2.10 (Hydrology & Water Quality) under subsections a) through c). Irrigation of plants would consist of hand watering and drip irrigation and conservation and containment measures to prevent excess water use. Thus, impacts would be less than significant and no mitigation would be required.

- b) Finding: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. *Less than significant impact.*

Discussion: Water for irrigation for the proposed commercial cannabis activities, including cultivation and nursery activities, would be provided by rainwater catchment and associated storage. Projected total water demand for proposed commercial cannabis cultivation is 2,154,095 gallons (Appendix 1 - Cultivation and Operations Plan, 2021). Rain would be collected in the 2.65-million-gallon capacity pond and 38 5,000-gallon plastic tanks plumbed to catchment surfaces.

The Cultivation and Operations Plan (Appendix 1) provides a detailed breakdown of rainwater catchment and use during average and drought years, accounting for evaporation. The total irrigation demand plus pond evaporation is approximately 2,832,024 gallons (Table 4). The total rainwater collection potential, including surface area of the pond, greenhouses, dry buildings, and the proposed processing and nursery buildings, during an average rainfall year of 73.93 inches is approximately 8,301,376 gallons (Table 3), nearly triple the expected demand. During dry years, the total collection potential varies from 3,058,697 gallons to 3,974,959 gallons, depending on the dataset used to estimate the lowest rainfall on record (Table 3). Using either available dataset, annual rainfall capture would be sufficient to meet the proposed demand, even during the minimum precipitation year on record of 27.24 inches and accounting for pond evaporation.

Therefore, it is expected that even during dry years, sufficient water would be available to support the Proposed Project. Additionally, the applicant would utilize water management strategies to conserve onsite use of water and fertilizers. Therefore, the Proposed Project would have sufficient water supplies available during normal, dry and multiple dry years.

- c) Finding: The project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. *No impact.*

Discussion: The project site is located in an unincorporated area of Humboldt County near the community of Petrolia, which does not have a municipal septic system. The proposed onsite wastewater treatment system would be designed by a qualified engineer and would be approved by the Humboldt County Division of Environmental Health (DEH). Therefore, the Proposed Project would not 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-e) Finding: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and the project would comply with federal, state, and local management and reduction statuses and regulations related to solid waste. *Less than significant impact.*

Discussion: The California Integrated Waste Management Act of 1989 (Public Resources Code Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to divert waste from landfills (Public Resources Code Section 41780). Compliance with AB 939 is determined by the Department of Resources, Recycling, and Recovery (Cal Recycle), formerly known as the California Integrated Waste Management Board (CIWMB). Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the CIWMB. In 2010, the State legislature passed AB 341 (Chesbro) which set a statewide recycling goal of 75% by 2020 which is anticipated to be achieved through source reduction, recycling, and continued diversion of materials such as organic wastes. According to the Humboldt County General Plan Update Revised Draft EIR, the 2017 waste diversion rate for the unincorporated area of the county was 74% (Humboldt County General Plan, 2017).

The Proposed Project would comply with all federal, state, and local statutes related to solid waste, including AB 939. This would include compliance with the Humboldt Waste Management Authority's recycling, hazardous waste, and composting programs in the county to comply with AB 939. Solid waste generated by the Proposed Project would include the following: 1) plant material, nutrient supplement and soil containers, etc. generated from the cultivation, nursery, and breeding activities; 2) plant material generated from the processing activities; and 3) typical office and domestic solid waste generated by the employees.

Trash and recycling containers would be located near the cultivation facilities in a safe and enclosed location to prevent animal intrusion. Garbage and recycling would be hauled offsite two times per month or as needed to nearest waste management authority. Items that can be recycled would be separated and recycled. Stalks would be chipped for ground cover and composted. Spent potting soil would be stored in a contained area with environmental measures in place and would be covered during winter months and then amended in pots before further use.

The Humboldt County General Plan Waste Management Section of the Conservation and Open Space Element (2017) includes waste diversion goals. According to the General Plan, in 2012 the County as a whole disposed of 84,145 tons of solid waste in landfills, with approximately 43% or 36,182 tons emanating from the unincorporated areas of Humboldt County. The General Plan encourages implementation of waste reduction programs, including recycling.

The 280 lbs. of proposed refuse generated by the agricultural operation and the 150 lbs. of non-recyclable residential waste total 430 lbs. of waste added to the landfill annually. The majority of green waste would be composted. The estimated 430 lbs. of waste is approximately 25% of the average household annual waste of

approximately 2,200 (CalRecycle, 2021), and less than 0.00006% generated by unincorporated areas of the County in 2012 (Humboldt County General Plan, 2017). Green waste is proposed to be composted onsite, however, even if all of the green waste and the generated refuse (totaling 8,430 lbs.) were treated as waste, total project waste would comprise less than 0.001% of waste from unincorporated areas of the County.

According to the Humboldt County General Plan Update Revised Draft EIR, Eel River Disposal manages the transport of self-hauled and non-HWMA member waste, as well as waste received at the Redway Transfer Station. Solid waste is transported for disposal to the Anderson Landfill for disposal by Eel River Disposal, and Alves Inc. also hauls residual waste from its operation to Anderson, California. This landfill is not expected to close until 2036 (Humboldt County, 2021). The Proposed Project would dispose of less waste than an average single-family residence and comprises a miniscule percentage of waste generated by the County. Additionally, the Proposed Project intends to divert waste from landfills where possible by reusing usable products and recycling. Therefore, the Proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs, would not produce waste in excess of state or local standards or impair attainment of solid waste goals, and would not violate any federal, state, or local statutes and regulations related to solid waste. Impacts would be less than significant, and no mitigation measures would be necessary.

Mitigation Measures

None.

3.2.20. WILDFIRE

If location near state responsibility areas or lands classified as very high hazard severity zones, would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting:

Fire protection in Humboldt County is provided by local districts, cities, and CALFIRE. The project site is within the Petrolia Fire Protection District and the Petrolia Fire Protection District “Proposed Annexation Area” response area. The site is not located within a Firewise Community. CALFIRE identifies fire hazard severity zones in State Responsibility Areas (SRAs) throughout California.

The Proposed Project site is located near the community of Petrolia, in rural Humboldt. The site is within an SRA and has a Moderate Fire Hazard Severity rating (Humboldt Web GIS 2020). The Proposed Project is mostly located within the fire response jurisdiction of the Petrolia Fire Protection District, who would be the likely response team if a fire were to occur onsite. APN 104-232-005 is currently located in the Petrolia Fire Protection “Proposed Annexation Area”.

The Petrolia Fire Protection District technically covers approximately 11 square miles, including the majority of the Proposed Project Site, though the Petrolia Volunteer Fire Department also serves the approximately 91-square mile area outside of the district (Humboldt Local Agency Formation Commission, 2017).

The Petrolia Fire Station is the nearest station and emergency response location to the project site, located approximately 2.4 road miles southwest of the project site (drive time of approximately 10-15 minutes). Two historical records of fires are located on the property: the Apple Fire in 1973, which burned approximately 735 acres, and the Conklin Fire in 1972, which burned approximately 572 acres (Humboldt Web GIS, 2022). Both historic fires were located in the eastern, forested area of the property, and neither overlapped with the Proposed Project area.

The County of Humboldt Office of Emergency Services coordinates emergency response in Humboldt County through the Humboldt Operational Area. The Humboldt Operational Area is composed of the County of Humboldt, serving as the lead agency, and all political subdivisions (cities and Special Districts) within the county.

Analysis

- a-d) **Finding:** The project would not substantially impair an adopted emergency response plan or emergency evacuation plan; would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; would not require the installation or maintenance of associated infrastructure (e.g., roads, fuel breaks, emergency water sources) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. *Less than significant impact.*

Discussion: According to Humboldt County Web GIS mapping, the project site is located in a moderate fire hazard severity zone within the SRA, not within a high or very high fire hazard severity zone.

The risk of causing a wildfire would not be significant during construction and operation because the project activities would comply with state and local requirements. Equipment shall be “fire-safe”, i.e. operating under a fire safety plan and equipped with spark arrestors. The access road shall be maintained in a state such that it is free of vegetation during times of activity. The proposed PG&E upgrade would include approximately 500 ft. of trenched underground electrical line, however it would be trenched underground and would not increase the risk of fire onsite.

Fueling of vehicles/equipment during construction activities would occur off-site or be transported and dispensed from pick-up trucks equipped for such a purpose. During long-term operation of the project, fuel would be stored on-site for equipment use in containers designed for fuel storage that includes secondary containment.

As required by fire code, all of the existing and proposed buildings, except the greenhouse structures and the drying barn, would be developed with fire suppression systems. In addition, SRA improvements include a designated SRA tank, management of trees and vegetation around existing structures to maintain the required 100-foot defensible space and all structures on the property meet the 30-foot SRA setback requirement from property lines.

The Proposed Project would be required to comply with the Humboldt County Fire Safe Ordinance (County Code Section 31111 et seq), which CalFire has accepted as functionally equivalent to PRC 4290. The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signing of streets and

buildings, minimum water supply requirements, and setback distances for maintaining defensible space. The project site is accessed by Chambers Road, which is developed to Category 4 standards (Road Evaluation, 2021 – Appendix 2). Improvement plans for the Proposed Project would be subject to approval by the Humboldt County Building Department to verify compliance with the County’s Fire Safe Ordinance which would ensure that adequate access for emergency response and evacuation is provided. Therefore, a less than significant impact would occur and no mitigation would be required.

Mitigation Measures

None.

3.2.21. MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting:

The project information provided for each of the topics above has been reviewed for all actions associated with it; during both temporary construction and long-term operation. Based on the project description and its location, the Proposed Project would not result in any significant impacts with the incorporated operating restrictions, mitigation measures, as well as those standards and requirements of other regulating resource agencies.

Analysis

- a) **Finding:** The Proposed Project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. *Less than significant impact with mitigation incorporated.*

Discussion: All impacts to the environment, including impacts to habitat for fish and wildlife species, fish and wildlife populations, plant and animal communities, rare and endangered plants and animal species, and historical and prehistorical resources were evaluated as part of the analysis in this document. Where impacts were determined to be potentially significant, mitigation measures have been imposed to reduce those impacts to less than significant levels. Accordingly, with incorporation of the mitigation measures imposed throughout this document, the Proposed Project would not substantially degrade the quality of the environment and impacts would be less than significant.

- b) Finding: The Proposed Project will not have impacts that are individually limited, but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of a Proposed 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). (CEQA Guidelines §§ 15064(h)(1), 15355.) *Less than significant impact with mitigation incorporated.*

Discussion: This mitigated negative declaration documents the project's design features and clear, specific mitigation measures that eliminate the project's potential, project-specific impacts on the environment or mitigates its potential impacts to a less-than-significant level. A "lead agency may determine in an initial study that a project's contribution to a significant cumulative impact would be rendered less than cumulatively considerable and thus is not significant." (CEQA Guidelines, § 15064(h)(2).)

When making this determination, the lead agency may conclude that the effects of a project under review would not be cumulatively considerable where "there is no evidence of any individual potentially significant effect." (*Sierra Club v. West Side Irrigation District* (2005) 128 Cal.App.4th 690, 701-702 (*Sierra Club*), citing *Leonoff v. Monterey County Board of Supervisors* (1990) 222 Cal.App.3d 1337, 1358 (*Leonoff*).) Importantly, the "mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the Proposed Project's incremental effects are cumulatively considerable." (CEQA Guidelines § 15064(h)(4).)

A lead agency's analysis of cumulative impacts in a mitigated negative declaration is not the same as the analysis required in an EIR. In the mitigated negative declaration context, the lead agency's obligation is to determine whether the incremental effects of the project under review are "considerable". (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1996) 42 Cal.App.4th 608, 624-635 (*San Joaquin Raptor*).) A lead agency's investigation of this question, further, does not require "some sort of grand statistical analysis" or other detailed inquiry of the type that could be appropriate in an EIR. (*San Joaquin Raptor*, p. 625.) A lead agency, as noted, can correctly conclude that the impacts of a project under review are not cumulatively considerable when there is no substantial evidence that any incremental impacts of the project are potentially significant. (*San Joaquin Raptor*, p. 624, citing *Leonoff*, at p. 1358.)

As discussed throughout this document, implementation of the Proposed Project has the potential to result in impacts to the environment that are individually limited, however, mitigation has been incorporated to reduce any potentially significant impacts that are individually limited to a less than significant level.

According to the Humboldt County Planning Department Accela database, twelve (12) active commercial cannabis operations are located within 1 mile of the Proposed Project Area (Figure 4, pg. 24). The Proposed Project Area is located in the Cape Mendocino Planning Watershed, which under Resolution 18-43 by the Humboldt County Board of Supervisors is limited to 650 total permits and 223 total acres of commercial cannabis cultivation (Humboldt County Board of Supervisors, 2018). See Figure 14 for a recent map presented at the June 16, 2022 Planning Commission Meeting that shows pending, approved, and enforcement commercial cannabis projects located near the Proposed Project in the Cape Mendocino Planning Watershed.

As of June 2nd, 2022, total approved permits in the Cape Mendocino Planning Watershed were approximately 218 permits and total approved acres were approximately 78 acres (Humboldt County Planning Department Staff Report, June 2022). With approval of the Cisco Farms, Inc. Cannabis Project, and allowing time for additional approvals, total approved permits in the Cape Mendocino Watershed would likely range from 219 – 235 individual permits, well below the 650 total specified under Resolution 18-43. Total cultivation acreage, with approval of this Project, would likely range from 83 to 95 acres, less than half of the 223-acre cap considered and adopted by the Board of Supervisors (2018).

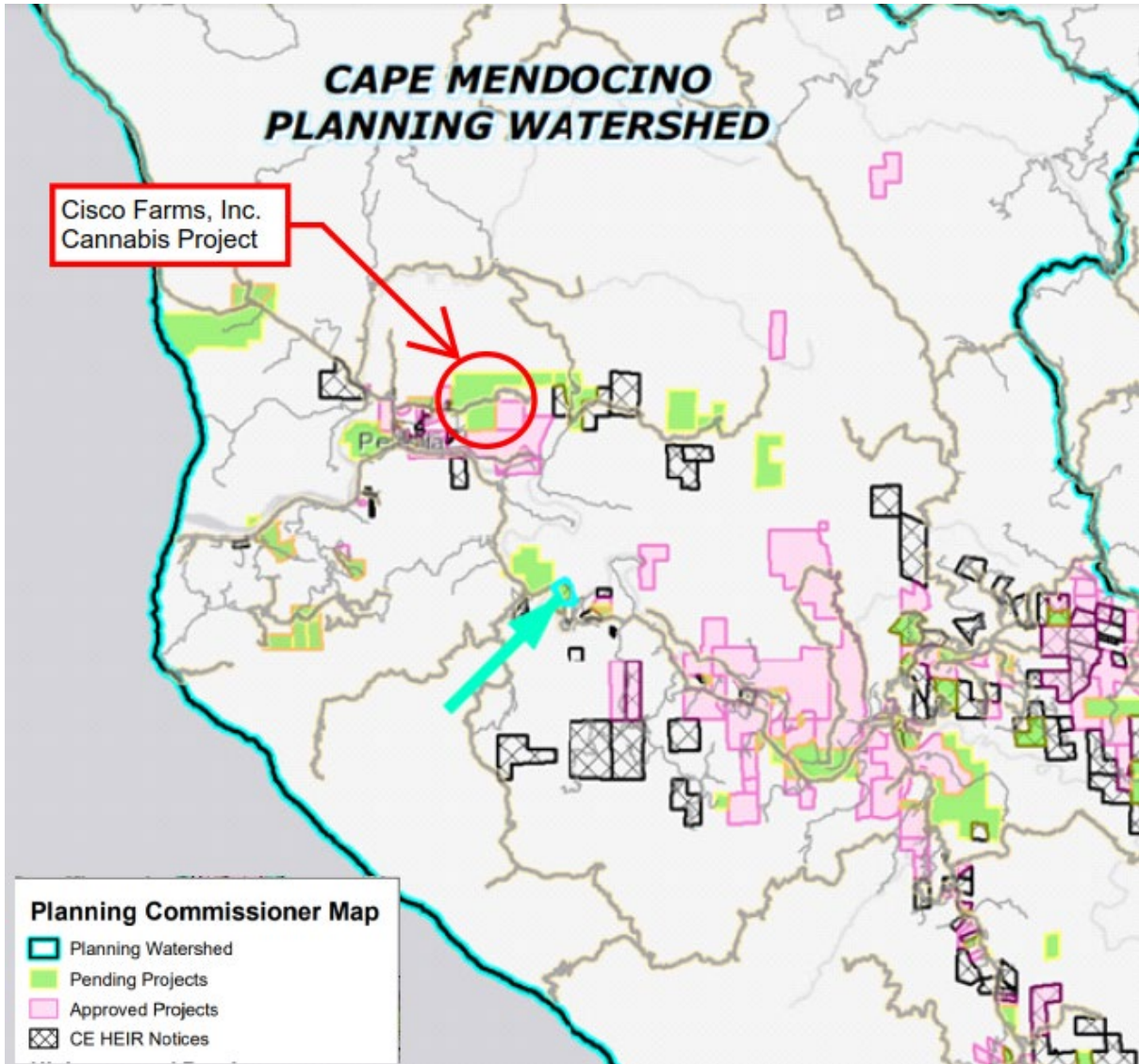


Figure 14: Cape Mendocino Planning Watershed Planning Commissioner Map of Approved, Pending, and Enforcement Commercial Cannabis Projects (Humboldt County Staff Report, June 2022)
 (Note: Image taken from a separate project’s Staff Report; disregard the blue arrow)

The Proposed Project would occur in a contiguous area in the northwest of the parcel, on the annual/perennial grassland, out of any riparian setbacks or riparian habitat. Approximately seven (7) acres would be disturbed. As previously mentioned, the Proposed Project Area could provide habitat for sensitive species, including the North American porcupine, American badger, Cooper’s Hawk, Golden Eagle, and Western bumble Bee (See Section 3.24, discussion on Biological Resources). Within the 517-acre subject parcel, over 145 acres of similar grassland habitat would remain undeveloped and undisturbed by the Proposed project. Within a one-mile radius, excluding existing and proposed cannabis projects, there is over 500 acres of similar grassland habitat, per Google Earth Imagery. Therefore, the disturbed area associated with the Proposed Project represents approximately 1.4% of the available habitat in a 1-mile radius. Under the court’s holding in *Sierra Club*, the absence of any individual potentially significant effect is a strong indicator that a project would not have

considerable cumulative effects (*Sierra Club*, pp. 701-702.) Therefore, impacts to mammal, bird, and invertebrate species would be considered not cumulatively significant.

This document includes specific, effective mitigation measures that reduce the Proposed Project's potential environmental impacts to a less-than-significant level. With regard to biological resources impacts in particular, the Proposed Project's impacts were analyzed through a site-specific biological study, botanical study, wetlands delineation, and database searches. This document incorporates mitigation measures that require preconstruction surveys and noise and light performance standards, among other measures and Proposed Project design features. These measures reduce the Proposed Project's individual impacts to a less-than-significant level.

With regard to other resource categories, the Proposed Project would not have any impacts that are considered cumulatively considerable. Aesthetically, the Proposed Project would not be visible from any designated scenic vistas and would conform to International Dark Sky Standards. The Proposed Project aligns with the Humboldt County Zoning and General Plan land use designations and would follow all requirements in the County's Commercial Cannabis Land Use Ordinance, and would therefore have a less than significant impact on Land Use and Agricultural/Forestry resources. The Project is located within the North Coast Air Basin, which is currently in non-attainment for PM10, and would follow all requirements surrounding fugitive dust prevention. The Proposed Project would operate entirely off of renewable energy, would not utilize generators as a primary power source, and would not significantly contribute to increased levels of PM10 or other pollutants, including Greenhouse Gas Emissions. The Proposed Project would not require an excessive amount of grading and would not significantly to geologic instability in the Mattole Valley area. All proposed buildings would be constructed in conformance with the most recent California Building Code. No hazardous waste would be generated onsite, and the Project would follow all regulations surrounding hazardous materials. No mineral resources would be extracted, and significant noise levels would not be generated from the Proposed Project. Groundwater and rainwater would both be utilized at less than significant levels. For analysis on impacts to additional resource categories, see discussion in sections 3.2.1-3.2.20, above.

Current practices surrounding the Proposed Project include ranching, agriculture, residential, and commercial cannabis cultivation. The Proposed Project is allowed by the Humboldt County Zoning Code. The Project would not increase the number of permits or acres of cultivation in the Cape Mendocino Watershed above established limits (per Resolution 18-43). The Proposed Project is consistent with the character of the surrounding neighborhood and would individually or cumulatively significantly contribute to any impact, with mitigation measures incorporated.

The Proposed Project, further, is consistent with the Commercial Cannabis Land Use Ordinance (CCLUO), that Humboldt County adopted in connection with the adoption of the Final Environmental Impact Report for cannabis cultivation in the unincorporated areas of Humboldt County. The FEIR expressly analyzed environmental impacts of commercial cannabis cultivation operations as permitted under the CCLUO. In other words, the County has already analyzed the cumulative impacts of commercial cannabis activities within the project area and determined that projects that are consistent with the CCLUO and the FEIR would not result in significant impacts.

The Proposed Project's consistency with the CCLUO and the County FEIR, and its incorporation of required mitigation measures and conditions of approval, provide another basis for the County to determine that the Proposed Project would not result in cumulatively considerable impacts. In all instances where the project has the potential to contribute to cumulatively considerable impacts to the environment (including the resource categories biological resources and cultural resources) mitigation measures have been imposed to reduce the potential effects to less than significant levels. As such, with incorporation of the mitigation measures imposed

throughout this document, the Proposed Project would not contribute to environmental effects that are individually limited, but cumulatively considerable, and impacts would be less than significant with mitigation.

- c) **Finding:** The Proposed Project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly. *Less than significant impact with mitigation incorporated.*

Discussion: The Proposed Project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this document. In instances where the Proposed Project has the potential to result in direct or indirect adverse effects to human beings, including impacts to Air Quality, Energy, Geology and Soils, and Biological Cultural Resources, mitigation measures have been applied to reduce the impact to below a level of significance. With required implementation of mitigation measures identified in this document, construction and operation of the Proposed Project would not involve any activities that would result in environmental effects which would cause substantial adverse effects on human beings.

Mitigation Measures

Implement Mitigation Measures AQ-1, BIO-1, BIO-2, CUL-1, EN-1, and GEO-1.

3.2.22. MITIGATION MEASURES, MONITORING, AND REPORTING PROGRAM

The Department found that the project could result in potentially significant adverse impacts unless mitigation measures are required. A list of mitigation that addresses and mitigates potentially significant adverse impacts to a level of non-significance follows.

Mitigation measures were incorporated into conditions of project approval for the project. The following is a list of these measures and a verification form to ensure measures shall be met.

Mitigation Measures

AQ-1. During construction and operation, the following dust control measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, excavations, and unpaved access roads) shall be watered two times per day in areas of active construction.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All vehicle speeds on unpaved roads shall be limited to 15 mph, unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage shall be provided for construction workers at all access points.
- All construction and operation equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments
During construction activity and project operations (ongoing)	Applicant	Humboldt County Planning and Building Department in consultation with North Coast Air Resources Control Board	Inspection Report		

BIO-1. Preconstruction surveys for American badgers (*Taxidea taxus*) shall be conducted prior to any ground disturbance or construction in the Proposed Project area. Surveys shall be conducted by a qualified biologist no more than one week prior to ground disturbance. If active badger dens are determined to be present, badger relocation to other onsite suitable habitat shall occur in coordination with CDFW.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments

No more than one week prior to ground disturbing activities	Qualified Biologist	Humboldt County Planning and Building Department in consultation with the California Department of Fish and Wildlife	Qualified Biologist will prepare report		
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BIO-2. For all construction-related activities that take place within the nesting season, accepted as February 1 through August 31, a preconstruction nesting-bird survey for migratory birds, including Cooper’s hawk (*Accipiter cooperii*) and Golden eagle (*Accipitridae chrysaetos*), shall be conducted by a qualified biologist no more than two weeks prior to construction within the Proposed Project area and a buffer zone determined by the qualified biologist, depending on the species nesting. The timing of surveys shall be determined in coordination with the CDFW. If active nests are found, a no-disturbance buffer zone shall be established, the size of which the biologist shall determine based on nest location and species. Within this buffer zone, no construction shall take place until the young have fledged or until the biologist determines that the nest is no longer active.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments
No more than two weeks prior to ground disturbing activities, if occurring between February 1 st and August 31 st	Qualified Biologist	Humboldt County Planning and Building Department in consultation with the California Department of Fish and Wildlife	Qualified Biologist will prepare report		

CUL-1. If cultural materials for example: chipped or ground stone, historic debris, building foundations, or bone are discovered during ground-disturbance activities, work shall be stopped within 50-foot buffer of the discovery location, per the Cultural Resources Investigation Report. Work near the archaeological find(s) shall not resume until a professional archaeologist, who meets the Secretary of the Interior’s Standards and Guidelines, has evaluated the materials and offered recommendation for further action.

If human remains are discovered during project construction, work would be stopped at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The Humboldt County coroner would be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code, Section 5097). The coroner would contact the NAHC. The descendants or most likely descendants of the deceased would be contacted, and work would not resume until they have made a recommendation to the landowner or the

person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments
During construction activity and project operations	Applicant and, if necessary, a qualified professional archaeologist	Humboldt County Planning and Building Department in consultation Tribal governments, if necessary	If needed, the qualified professional archaeologist will prepare a Compliance Report.		

EN-1. Power supply shall be developed to support the scale of the Proposed Project during phased build out. Mixed-light cultivation shall not occur until required power sourced from a renewable source is brought to the site (e.g., installation of solar power or completion of a PG&E upgrade). Prior to the onset of power, proposed cultivation shall be outdoor cultivation cultivated using light-deprivation techniques in greenhouses. At no point in time shall onsite activities exceed existing site power capacity.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments
During construction activity and project operations	Applicant	Humboldt County Planning and Building Department in consultation	Inspection report		

GEO-1. If paleontological resources are encountered during implementation of the Project, ground disturbing activities will be temporarily redirected from the vicinity of the find. A qualified paleontologist shall be retained by the developer to make an evaluation of the find. If a significant paleontological resource(s) is discovered on the property, the qualified paleontologist shall develop a plan of mitigation which shall include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation in the find a local qualified repository, and preparation of a report summarizing the find.

Implementation Time Frame	Party Responsible for Implementation	Party Responsible for Verification	Form of Verification	Date of Verification	Verified/ Comments

During construction activity and project operations	Applicant and, if necessary, a qualified paleontologist	Humboldt County Planning and Building Department in consultation Tribal governments, if necessary	If needed, the qualified paleontologist will prepare a Compliance Report		
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4. List of Preparers

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Desmond Johnston – Senior Planner

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Cenci Consulting

Cultivation and Operations Plan (December 2021)

Project Description (December 2021)

Letter to Humboldt County: “Agricultural activities and relation to the Williamson Act” (December 18, 2021)

OurEvolution Engineering

Site Map (November 2021)

Road Evaluation (March 2021)

Septic Feasibility Study (August 2021)

Onsite Wastewater Treatment System Design (October 2021)

NorthPoint Consulting Group, Inc.

CalEEMod Analysis (April 2022)

Naiad Biological Consulting

Botanical Report of Special Status Native Plant Populations and Natural Communities (September 2021)

Biological Reconnaissance and Project Feasibility Assessment Report (September 2021)

Invasive Species Control Plan (September 2021)

Golden Eagle Survey Report – in conjunction with Erin Phillips (February 2022)

William Rich and Associates

Cultural Resources Investigation Report (May 2021)

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Appendix 1

Site Map (OurEvolution, November 2021)

Cultivation and Operations Plan (Cenci Consulting, December 2021)

Project Description (Cenci Consulting, December 2021)

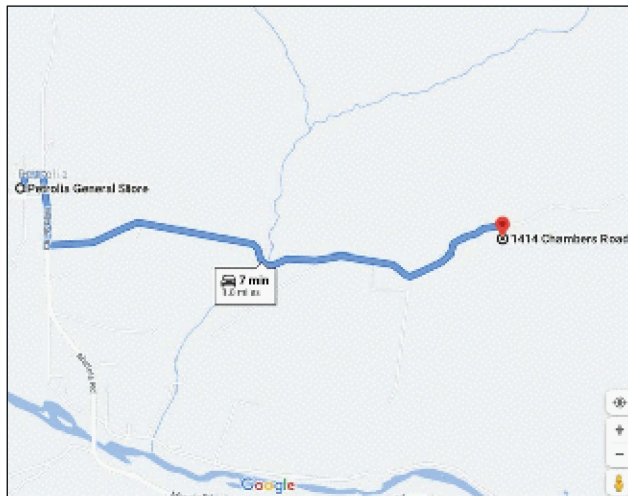
Appendix 2

1. Botanical Report of Special Status Native Plant Populations and Natural Communities (Naiad Biological Consulting, September 2021)
2. Biological Reconnaissance and Project Feasibility Assessment Report (Naiad Biological Consulting, September 2021)
3. Invasive Species Control Plan (Naiad Biological Consulting, September 2021)
4. Golden Eagle Survey Report (Erin Phillips in conjunction with Naiad Biological Consulting, February 2022)
5. Road Evaluation (OurEvolution Engineering, March 2021)
6. Cultural Resources Investigation Report for Commercial Cannabis Cultivation at APN 104-232-005 and APN 105-101-011 in Petrolia, Humboldt County, California (William Rich and Associates, May 2021) – *listed as reference only, on file with Humboldt County Planning and Building Department*
7. Septic Feasibility Study (OurEvolution Engineering, August 2021)
8. Onsite Wastewater Treatment System Design (OurEvolution Engineering, October 2021)
9. Web Soil Survey Type Map (Natural Resources Conservation District, February 2021)

10. Letter to Humboldt County: “Agricultural activities and relation to Williamson Act” (Cenci Consulting, December 2021)
11. CalEEMod Analysis for Cisco Farms, Inc. Cannabis Project (NorthPoint Consulting, April 2022)
12. Notice of Applicability for Waste Discharge Requirements, Water Quality Order WQ 2019-0001-DWQ for WDID 1_12CC428193 (State Water Resources Control Board, May 2022)
13. Executed Streambed Alteration Agreement No. EPIMS-HUM-18009-R1C (California Department of Fish and Wildlife, June 2022)

Appendix 1 Cover Sheet

<u>Document Title</u>	<u>PDF Page No.</u>
Site Plans (OurEvolution Engineering, November 2021)	2-3
Project Description (Cenci Consulting, December 2021)	4-17
Cultivation and Operations Plan (Cenci Consulting, December 2021)	18-61



DRIVING DIRECTIONS FROM PETROLIA GENERAL STORE

1. HEAD NORTH ON SHERMAN AVENUE
2. TURN RIGHT ON GRANT STREET
3. CONTINUE ONTO OLD COAST WAGON ROAD
4. CONTINUE ONTO MATTOLE ROAD (0.2 MILES)
5. TURN LEFT ONTO CHAMBERS ROAD (1.5 MILES TO GATE)

PROJECT INFORMATION

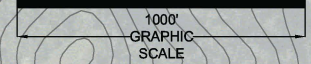
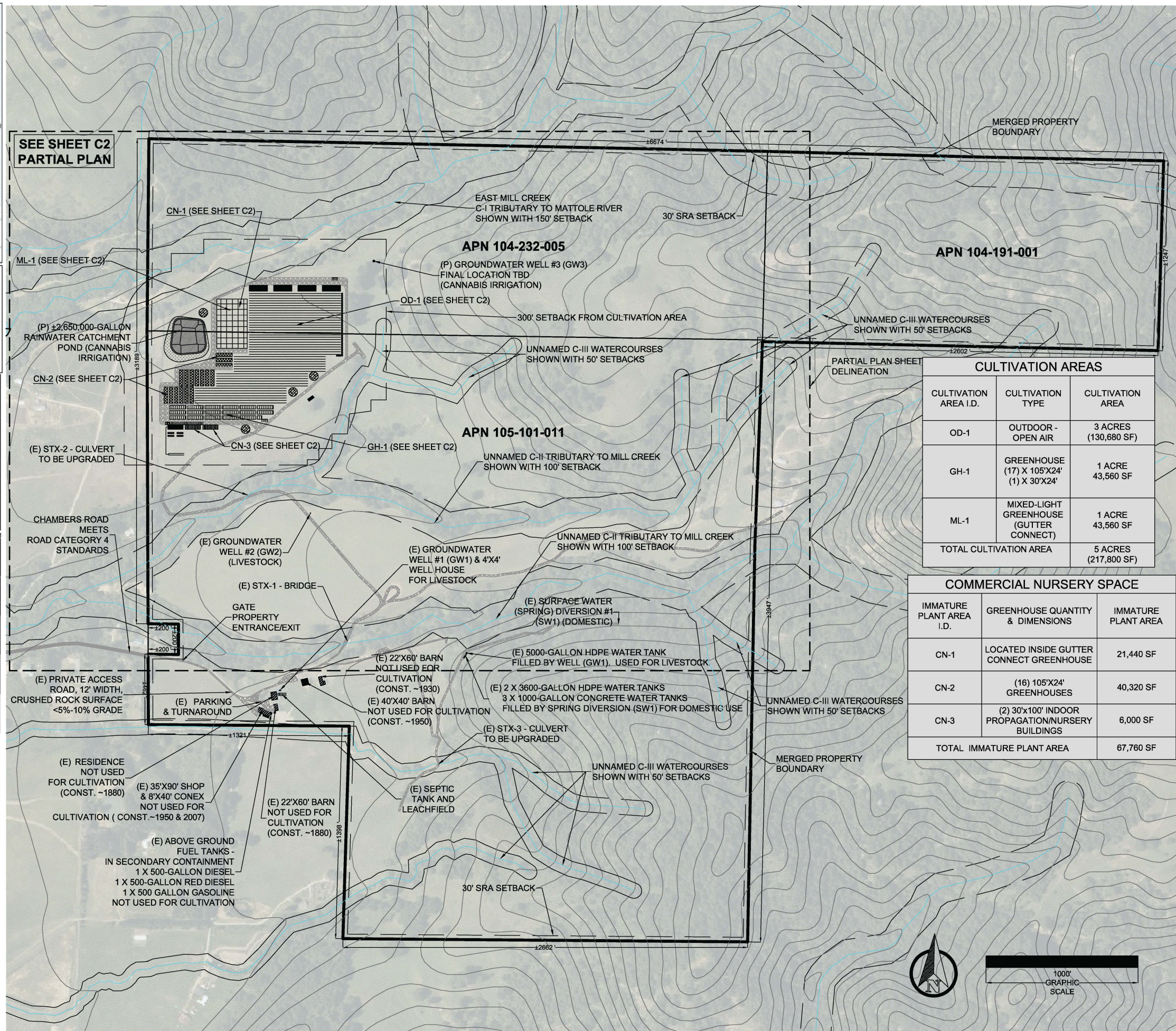
APPLICANT: CISCO FARMS, INC.
 PROPERTY OWNER OF RECORD: BENEMANN FAMILY TRUST
 OWNER ADDRESS: PO BOX 1083, TRINIDAD, CA 95570
 APN: 105-101-011, 104-232-005 & 104-191-001
 PROPERTY ADDRESS: 1414 CHAMBERS ROAD, PETROLIA, CA 95558
 HUMBOLDT COUNTY CANNABIS PERMIT APPLICATION: TBD
 MERGED PROPERTY SIZE: 517 ACRES
 HUMBOLDT COUNTY ZONING: AE-B-5(160)

GENERAL NOTES

1. NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS, OR KNOWN TRIBAL CULTURAL RESOURCES WITHIN 600 FEET OF CULTIVATION SITES.
2. NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
3. NO UNDEVELOPED PARCEL BOUNDARY WITHIN 300' OF CULTIVATION SITE.
4. NO CULTIVATION OR OPERATIONS WITHIN STREAMSIDE MANAGEMENT AREAS.
5. ALL KNOWN WATERCOURSES SHOWN WITH STREAMSIDE MANAGEMENT AREA BUFFERS.
6. APNS 104-232-005, 104-191-001 & 105-101-011 CONSTITUTE ONE LEGAL PARCEL.
7. CALFIRE WATER STORAGE TANKS TO BE EQUIPPED WITH 2.5" OUTLET W/MALE AMERICAN NATIONAL FIRE HOSE SCREW THREADS.
8. PROPERTY BOUNDARIES SHOWN ARE BASED ON HUMBOLDT COUNTY GIS AND MERGER SURVEY MAPS COMPLETED BY ED GORGE JR., PLS

CULTIVATION WATER SOURCE & STORAGE

1. (P) RAINWATER CATCHMENT
 2. (P) GROUNDWATER WELL (GW3)
- WATER STORAGE**
1. (P) 40 X 5,000 GALLON HDPE WATER STORAGE TANKS - 200,000 GALLONS
 2. (P) RAINWATER CATCHMENT POND - 2,650,000 GALLONS
- TOTAL WATER STORAGE: 2,850,000 GALLONS**
 10,000 GALLONS TO BE HELD IN RESERVE FOR FIRE SUPPRESSION WITH CALFIRE SRA STANDPIPE AND TURNAROUND AREA AS NOTED ON C2.



CULTIVATION AREAS		
CULTIVATION AREA I.D.	CULTIVATION TYPE	CULTIVATION AREA
OD-1	OUTDOOR - OPEN AIR	3 ACRES (130,680 SF)
GH-1	GREENHOUSE (17) X 105'X24' (1) X 30'X24'	1 ACRE 43,560 SF
ML-1	MIXED-LIGHT GREENHOUSE (GUTTER CONNECT)	1 ACRE 43,560 SF
TOTAL CULTIVATION AREA		5 ACRES (217,800 SF)

COMMERCIAL NURSERY SPACE		
IMMATURE PLANT AREA I.D.	GREENHOUSE QUANTITY & DIMENSIONS	IMMATURE PLANT AREA
CN-1	LOCATED INSIDE GUTTER CONNECT GREENHOUSE	21,440 SF
CN-2	(16) 105'X24' GREENHOUSES	40,320 SF
CN-3	(2) 30'X100' INDOOR PROPAGATION/NURSERY BUILDINGS	6,000 SF
TOTAL IMMATURE PLANT AREA		67,760 SF



OUREVOLUTION ENGINEERING, INC.
 1821 BUTTERMILK LANE
 ARCATA, CA 95521
 360.791.3259
 ANDY@OUREVOLUTION.COM

NO.	HISTORY / REVISION	BY	CHK	DATE

CISCO FARMS, INC.
 MERGED PROPERTY APNs 105-101-011, 104-232-005 & 104-191-001
 1414 CHAMBERS ROAD, PETROLIA, CA 95558

CULTIVATION SITE PLAN OVERVIEW

DRAWN	ACS
CHECK	GAC
APPROVED	ACS
DATE	12/09/2021
JOB NUMBER	CF-001
SHEET C1	



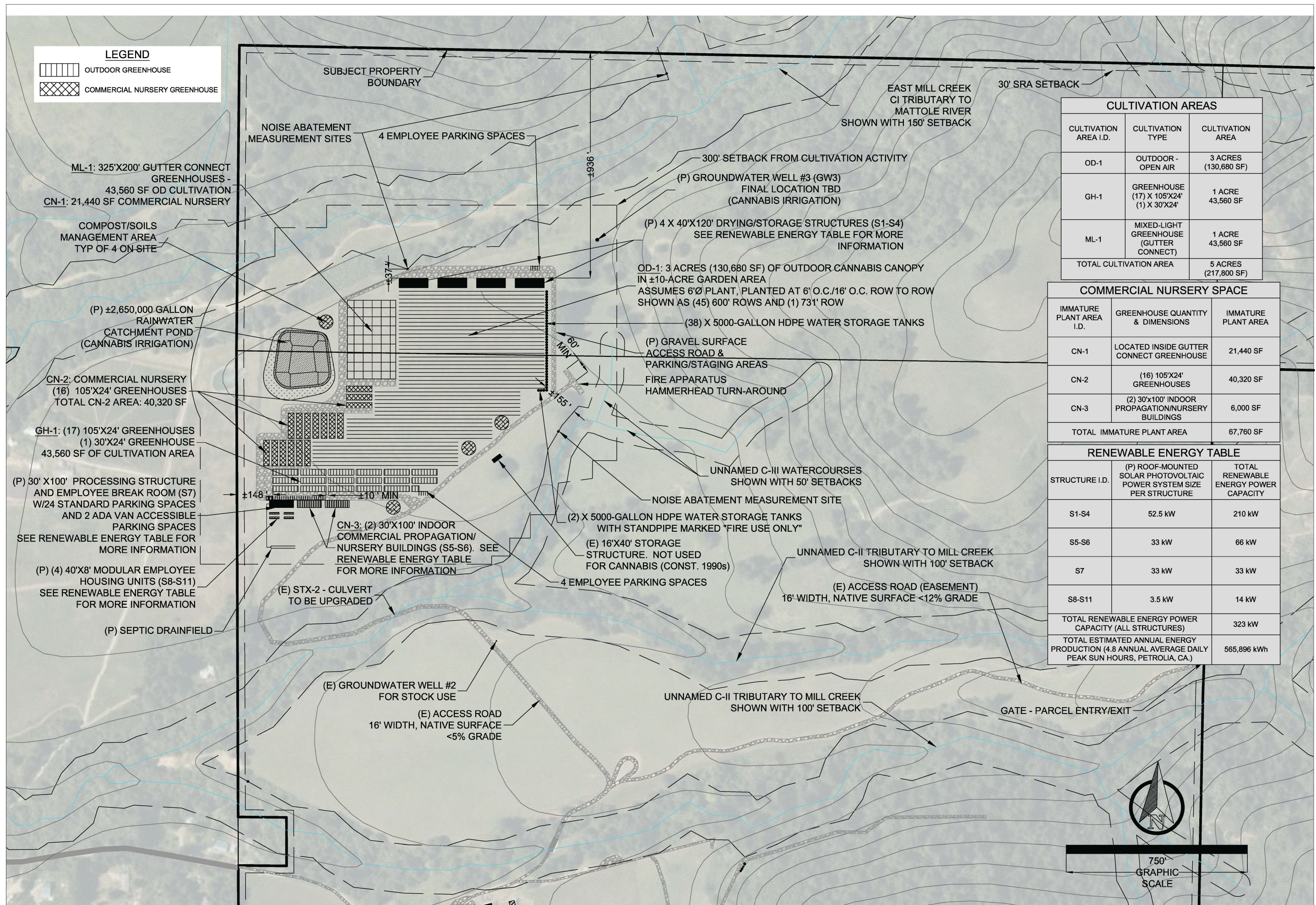
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DRAWN	ACS
CHECK	GAC
APPROVED	ACS
DATE	12/9/2021
JOB NUMBER	CF-001
SHEET	C2

PARTIAL SITE PLAN



LEGEND

[Grid Pattern]	OUTDOOR GREENHOUSE
[Cross-hatch Pattern]	COMMERCIAL NURSERY GREENHOUSE

CULTIVATION AREAS

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RENEWABLE ENERGY TABLE

STRUCTURE I.D.	(P) ROOF-MOUNTED SOLAR PHOTOVOLTAIC POWER SYSTEM SIZE PER STRUCTURE	TOTAL RENEWABLE ENERGY POWER CAPACITY
S1-S4	52.5 kW	210 kW
S5-S6	33 kW	66 kW
S7	33 kW	33 kW
S8-S11	3.5 kW	14 kW
TOTAL RENEWABLE ENERGY POWER CAPACITY (ALL STRUCTURES)		323 kW
TOTAL ESTIMATED ANNUAL ENERGY PRODUCTION (4.8 ANNUAL AVERAGE DAILY PEAK SUN HOURS, PETROLIA, CA.)		565,896 kWh

CISCO FARMS INC.

PLN-2021-17384 CUP

APNs 105-101-011, 104-232-005, 104-191-001

PROJECT DESCRIPTION – UPDATED 12-08-21

EXECUTIVE SUMMARY

Cisco Farms Inc. is seeking Conditional Use Permits for 5 acres of new open-air cannabis cultivation and commercial nursery, and Zoning Clearance Certificates for two (2) Cannabis Support Facilities: commercial processing and Community Propagation Center on APNs 105-101-011, 104-232-005, and 104-191-001. Of the 5 acres, 3 acres will be full-sun outdoor, 1 acre light-deprivation in greenhouses with no artificial light, and 1 acre mixed-light in gutter-connect greenhouses with supplemental lighting not to exceed 25 watts/sf. Cultivation will result in 1-3 cycles annually, depending on the method. Nursery facilities total 67,760 sf and include 40,320 sf of greenhouses, 21,440 sf of gutter-connect greenhouses, and 6,000 sf of indoor/enclosed space. The Project proposal includes permitting of proposed facilities and structures that are appurtenant to the cultivation activities, which includes 19,200 sf of drying facilities. Drying and processing will initially occur off-site then move to on-site once these facilities have been constructed. A 3,000-sf commercial processing building is also proposed for both cannabis produced on-site and that produced by other cultivators.

All irrigation water will be sourced from rainwater catchment. A groundwater well will provide water designated for human use and sanitization only. A total of 2,850,000 gallons of water storage is proposed. Water will be stored on-site in one agricultural pond with 2,650,000-gallon capacity, and forty (40) plastic tanks, each with 5,000-gallon capacity (total 200,000 tank capacity). Total annual irrigation water use is projected to be 2,154,095 (8.3 gal/sf cultivation, 5.1 gal/sf nursery). Groundwater well use for human use and sanitization will be 111,709 gallons. Power will come from PG&E service and onsite renewables (solar and/or wind). There will be a maximum number of 34 employees during peak operations, with 12 during all other times. Approximately 1,280 sf of farmworker/ employee housing is proposed in modular units that will accommodate up to 8 persons. Domestic water for the housing will be sourced from the well and an OWTS will be installed. Access to the site is from Chambers Road, a paved County-maintained road. In addition, a Transport-only Self Distribution license will be sought at the state level in order to satisfy operational logistics.

1. INTRODUCTION

1.1. PURPOSE AND SCOPE

Cisco Farms Inc. (the “Applicant”) submits this application requesting approval of Conditional Use Permits for new open-air commercial cannabis cultivation and wholesale nursery and Zoning Clearance Certificates for Cannabis Support Facility: commercial processing center, and Community Propagation Center (cumulatively the “Project”) in the County of Humboldt (“County”). This application has been prepared in accordance with Humboldt County’s Commercial Cannabis Land Use Ordinance (CCLUO), No. 2599 (aka "Ordinance 2.0") and California Business and Professions Code § 26000 – 26250.

1.2. APPLICANT INFORMATION

Cisco Farms Inc.
PO Box 1083
Trinidad, CA 95570
(707) 499-6252

Cisco Farms Inc. is a California general stock corporation with one director and shareholder, Karl Benemann. As the Director, Mr. Benemann may bind the corporation in all matters in the ordinary course of corporate business. Mr. Benemann will act as the Designated Responsible Party and/or Representative of the Applicant for the activities described in this application.

Cisco Farms Inc. is an “agricultural employer” as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 commencing with Section 1140) of Division 2 of the Labor Code. The above statement fulfills requirements of California BPC §26051.5(a)(8). Cisco Farms Inc. shall register with the California EDD as an agricultural employer upon receipt of permit and shall abide by all Federal and state laws to which such employers are subject (CCLUO §55.4.12.2.7).

1.3. APPLICANT’S AGENT

Kate Cenci
Cenci Consulting
PO Box 148
Petrolia, CA 95558
(707) 616-7207
cenciconsulting@gmail.com

2. SITE DESCRIPTION

2.1. PROJECT LOCATION

2.1.1. ADDRESS

1414 Chambers Road
Petrolia, CA 95558

2.1.2. APN

105-101-011
104-232-005
104-191-001

2.1.3. VICINITY

The Project is located in the inland zone approximately 1.1 mile east of the community of Petrolia, as shown on Figure 1. Petrolia contains a general store, post office, elementary school, and a small number of rural residences. The nearest urban developments are Ferndale and Garberville, located approximately 20 miles north and 30 miles southeast, respectively, along Highway 101.

2.1.4. WATERSHED

The property is entirely located within the *Cape Mendocino* Planning Watershed (USGS HUC-8 *Mattole*) and the *Lower Mattole River* USGS HUC-12 subwatershed, which is not listed as an “impacted” and/or “refuge” HUC-12 subwatershed In Humboldt County Board of Supervisors Resolution 18-43 (adopted 05/08/18).

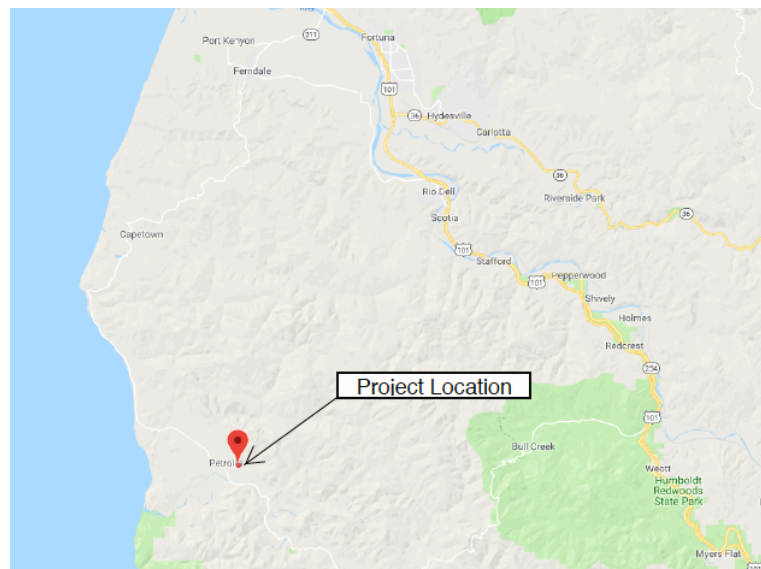


Figure 1. Vicinity Map

2.1.5. SPECIAL AREA APPLICABILITY

The Project is not located within any of the special areas or sensitive receptors listed in CCLUO 2.0 §55.4.5.1.

2.1.6. DIRECTIONS & ACCESS

From Ferndale, turn right on Bluff St/Ocean Ave at the south end of town, then shortly thereafter, turn left onto Wildcat Road heading towards Petrolia. Continue for approximately 30 miles until the town of Petrolia. Follow the main road (Front Street) through town and head right, onto Mattole Road. Continue for 0.2 miles then turn left onto Chambers Rd. After approximately 1.1 miles, Chambers Road ends at the property boundary of the Project site. A private driveway provides access from this point to the site. There is a locked gate near the beginning of the drive. The site is accessed by continuing through the gate and along the gravel drive, approximately 0.75 miles in a general northern direction, traversing two stream-crossings in the process. The Project site is located at the northern terminus of the access drive. A gravel drive shall surround all areas of cannabis activity, providing more site-specific access. Ample room for parking will be along the length of this drive, although specific required designated parking areas are proposed along the northern and southern portions.

2.2. PROPERTY DESCRIPTION

2.2.1. OWNERSHIP

In 2020, ownership of the property transferred from a longtime landowner to Karl and Esther Benemann, husband and wife. The couple then formed a legal trust, The Karl Francis Benemann and Esther Dawn Benemann Family Revocable Trust (the “Trust”), to which the property was then subsequently transferred.

2.2.2. SIZE

The Project site is situated on a property that comprises approximately 504 acres (County GIS), and thus is subject to eligibility requirements under CCLUO §55.4.6.1(c). The property is divided between three (3) APNs: 104-232-005 is 108.69 acres (GIS), 104-191-001 is 74.53 acres (GIS), and 105-101-011 is 320.7 acres (GIS). The APNs are part of a larger landholding known as the Walker Ranch or Walker Preserve. The Ranch is held in a Class B Agricultural Preserve (Land Conservation Contract / PLN-2020-16472, approved by Board of Supervisors on 09/29/2020) established under California Government Code § 51254 and the County’s Williamson Act Guidelines. Additionally, in July 2020, a Notice of Merger (NOM) and Lot Line Adjustment (LLA) application was submitted to the County Planning Department and subsequently approved in May 2021. While the NOM and LLA did not diminish the size of Walker Preserve, they re-assigned various parcels to compose three distinct tracts – A, B, and C – within the preserve. All cannabis activities are proposed to occur on Tract C, which is the property described herein. In particular, cannabis activities and infrastructure will occur on APNs 104-232-005 and 105-101-011.

2.2.3. GENERAL PLAN DESIGNATION & ZONING

The property has a Land Use Designation of Agricultural Grazing (AG) in the County’s General Plan, which “...applies to dry-land grazing areas in relatively small land holdings that support cattle ranching or other grazing supplemented by timber harvest activities that are part of the ranching operation, and other non-prime agricultural lands. Residential uses must support agricultural operation.”¹ The AG designation applies to all areas of the Project site where cannabis cultivation, nursery activities, processing, employee housing, and all other supporting activities will occur.

The property is zoned AE-B-5(160) for all parcels. According to the County’s Zoning Regulations (Humboldt County Code; HCC), the AE zone applies to “...fertile areas in which agriculture is and should be the desirable predominant use and in which the protection of this use from encroachment from incompatible uses is essential to the general welfare” (HCC §314-7.1).² Principal permitted uses in the AE zone include all general agricultural uses, including accessory agricultural uses and structures listed in HCC §314-43.1.3 and HCC §314-69.1.1, respectively. (The combined B-5 zoning allows for modification in regard to lot area and yard requirements in the principal zone (HCC §314-17.1)).

The Project site is not a timberland property that is subject to special additional restrictions under CCLUO 2.0. All cultivation shall be located within a non-forested area that was in existence prior to January 1, 2016, thus satisfying the requirements of §55.4.6.4.2. Please see *Historic Aerials: 105-101-011, 104-232-005 & 104-191-001* for confirmation.

2.2.4. LAND USE

2.2.4.1. Property

Current uses include cattle grazing and residential activities. Under the County’s Williamson Act guidelines, “Lands under contract within an agricultural preserve shall be used for the producing of agricultural commodities for commercial purposes and uses compatible with agriculture. The majority of the land area of any property under contract must be devoted to agricultural pursuits consistent with the purpose of the preserve in which the property is located.”³ The proposed cannabis Project – including all garden areas, infrastructure, water storage, and all spaces in between – will occur completely within an approximately 22-acre area of the ~1,043-acre preserve, or 2.1 %. The majority of the property and larger ranch will continue to be used for cattle grazing, which is consistent with the Land Conservation Contract terms and Williamson Act Guidelines.

¹ <https://humboldt.gov/DocumentCenter/View/62021/Section-48-Land-Use-Designations-PDF?bidId=>

² <https://humboldt.gov/DocumentCenter/View/4029/Humboldt-County-Zoning-Regulations-PDF?bidId=>

³ BOS Resolution No. 16-144. <https://humboldt.gov/DocumentCenter/View/57196/Agricultural-Preserve-Guidelines-?bidId=>

2.2.4.1.1. Existing Structures – non-cannabis

Several existing structures and facilities are located on the property and will not be associated with cannabis cultivation or cannabis activities. Existing structures are for residential and cattle operation uses. They are as follows:

- Residence – approx. 1,900 sf
- Barn 1 – 1,320 sf
- Barn 2 – 1,600 sf
- Barn 3 – 1,320 sf
- Shop – 3,150 sf
- Storage structure – 640 sf
- Conex container – 320 sf
- Three (3) above-ground fuel tanks – 500 gal each
- Groundwater well 1 – stock
- Groundwater well 2 – stock
- Spring diversion – domestic
- One (1) 5,000-gal HDPE water tank – stock
- Two (2) 3,600-gal HDPE water tanks – stock
- Three (3) 1,000-gal concrete water tanks – domestic

2.2.4.2. Surrounding Land Use

The property is located in an area of rural residential and agricultural uses that include livestock grazing, commercial cannabis cultivation, and small-scale vegetable and fruit farming. A Rural Community Center (RCC) designation for the town of Petrolia exists approximately 1 mile west of the property.

2.3. SETBACKS (§55.4.6.4.4)

All cultivation areas, nursery structures, processing building, and farmworker housing units meet the general requirements for property line setbacks (30 ft), setbacks from residences on neighboring parcels (300 ft), and undeveloped parcels (270 ft). Please see the accompanying Project Site Plan for details and locations. All Project features, including access roads and water storage infrastructure, are located greater than 30 ft from any parcel boundary and greater than 300 ft from any neighboring residences. The closest vacant parcel boundary to any cannabis-associated activity is located 936 ft to the north (APN 104-232-002). As the Project consists of various components, the following table (Table 1) has been assembled to assist in the review of various distances from Project activities to property lines and neighboring residences.

Table 1. Distances (in feet) from Cannabis Activity Areas on APN 105-101-011 et al. to Property Boundaries and Neighboring Residences[†]

CANNABIS ACTIVITY AREA*	CLOSEST PROPERTY LINE	NEIGHBORING RESIDENCE 1 (104-232-008)	NEIGHBORING RESIDENCE 2 (105-101-010)
OD-1	456	787	-
GH-1	148	720	-
ML-1	456	665	-
N1	456	665	-
N2	344	687	-
N3	360	-	793
CN-1	200	587	-
CN-2	248	-	738
Drying	456	880	-
Processing	136	-	766
Farmworker Housing	136	-	622

[†] Distances are provided for the nearest neighboring residence only

* See Site Plan for activity identification description

Currently all mapped Streamside Management Areas (SMA) near the Project site are of sufficient width to encompass at least 100' and 50' from riparian drip edge or top of bank for all perennial and intermittent streams, respectively. The smallest distances from cannabis activities to the edge of various streams SMAs near the Project site are shown in Table 2. All of these distances meet County Code § 314-61.1 setback requirements for Perennial streams (100') and intermittent streams (50'). These distances also satisfy the setback requirements of State Water Resources Control Board (SWRCB) Order No. WQ 2019-0001-DWQ, which list 150' for perennial/Class I streams, 100' for Intermittent/Class II streams, and 50' for ephemeral/Class III watercourses.

Table 2. Distances (in feet) from Cannabis Activities to Nearby Watercourse SMA Edges on APN 105-101-011 et al.

WATERCOURSE	NEAREST CANNABIS ACTIVITY*	DISTANCE TO SMA EDGE (FT)	DISTANCE TO RIPARIAN DRIP EDGE / TOP OF BANK (FT)
East Mill Creek (Class I)	OD-1	87	237
	Drying Building	37	187
Un-named Class II	GH-1	333	433
Un-named Class III	OD-1	155	205

* See Site Plan for activity identification description.

There are no Sensitive Receptors, such as schools, school bus stops currently in use, parks, churches or other places of religious worship, public parks, or Tribal Cultural Resources within 600 feet of the Project. There are no Tribal Ceremonial Sites within 1,000 feet of the Project.

2.4. SITE TOPOGRAPHY (§55.4.6.4.1)

The Project site is generally level and disturbed from past agricultural activities, primarily intensive grazing of livestock. Slopes in the area to be developed for the proposed use are 2-3%. Please see the accompanying map, *105-101-011, 104-232-005 & 104-191-001 Slope Evidence* for confirmation.

2.5. SOILS (§55.4.6.4.3)

The property contains “Prime Agricultural Soils”, “Prime farmland if irrigated” soils, and “Not prime farmland” soils.⁴ Both “Prime Agricultural Soils” and “Prime farmland if irrigated” soils meet the definition of Class I soils, as defined by NRCS (previously SCC).⁵ As such, this mapped soil type meets the definition of “Prime Agricultural Soils” (prime ag) listed in CCLUO 2.0.

Total Prime Agricultural Soils area on the property is approximately 120 acres. The Project will occur in an area that is predominantly “not prime farmland” soils, with only 0.96 acres of Prime Agricultural Soils found within the Project boundary (at the northwestern corner of the outdoor cultivation area and north of the gutter-connect greenhouses). This is approximately 0.8% of total Prime Agricultural Soils on the property, thus meeting the requirements of §55.4.6.4.3. Please see the accompanying *105-101-011, 104-232-005 & 104-191-001 Prime Ag Soils* map for details.

In regard to total land coverage, the Project will encompass an area of approximately 22 acres. This area includes outdoor cultivation, greenhouse cultivation, nursery greenhouses, all buildings, employee housing, staging areas, parking, driveways, water storage, and all spaces in-between. This is 4.4% of the total property acreage.

2.6. WATER SOURCE (§55.4.6.3.2)

The Project will source all irrigation water from rainwater catchment. Water will be stored in a pond and enclosed tanks. The pond has been designed with a capacity to collect adequate rainfall to meet irrigation demand (see *Cultivation & Operations Plan*). The pond design allows

⁴ Mapped and calculated using Humboldt County ArcGIS, *Prime Agricultural Soils* and *NRCS 2014 Soils (Proposed)*

⁵ https://www.nrcs.usda.gov/wps/portal/nrcs/detail/null/?cid=nrcs143_014052,
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf,
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/?cid=nrcs143_014040

for overflow into a rock spillway and drainage in the event of occupation by non-native species. The pond shall contain at least two (2) wildlife ladders to facilitate animal escapement.

Non-irrigation water – for drinking, sanitization, and employee residence use – will be sourced from a proposed groundwater well (GW3 on Site Plan, exact location TBD).

2.7. ENERGY SOURCE (§55.4.6.3.1)

Electricity for the Project and ancillary activities will be provided by grid power, with the exception of greenhouse fans, which may be grid or solar powered. Grid power use may be offset in future years through the installation of a permitted solar array. Please see the *Cultivation & Operations Plan* for further details of how the Project will meet the Performance Standard for Energy Use.

2.8. ROAD SYSTEMS (§55.4.6.3.3)

Access to the Project site is via a private driveway from Chambers Road, which is a paved county-maintained road developed to the Category 4 Standard (please see the *DPW Road Evaluation Report*). The driveway to the Project site is approximately 0.75 miles in length and contains two (2) stream-crossings – a bridge and a culvert. The culvert will be updated to meet 100-year streamflow event requirements, following all applicable California Department of Fish and Wildlife (CDFW), SWRCB, and County guidelines. An additional culvert on a road not related to cannabis activities will also be replaced, following all applicable state and local guidelines. A “standard” Lake and Streambed Alteration Agreement (LSAA) application was submitted to CDFW in May 2021 (Application ID 18009) for the culvert replacements and general cannabis activities. Please see *LSAA Application Submission Confirmation Page* for reference. The section entitled *Road Systems* in the accompanying *Cultivation & Operations Plan* contains further details of how the Project meets Performance Standards for road systems pertaining to cannabis operations.

2.9. BIOLOGICAL RESOURCES & ASSESSMENT

An initial biological assessment was performed in July 2020 in accordance with CCLUO §55.4.12.1.10. The Project was again evaluated in summer and fall 2021, and the report updated to reflect changes and updates to the Project and include additional flora and fauna surveys that were undertaken since the initial assessment was completed (please see the accompanying *Biological Reconnaissance and Project Feasibility Assessment Report* dated 09/09/2021; the “Report” in this section). The Report noted that the Project area had a history of prolonged and current disturbance due to intensive cattle grazing, and concluded that the Project would likely result in no direct impacts to sensitive habitats and would not severely alter the already-disturbed habitat quality of the site. Likewise, no potential indirect impacts to the environment,

surrounding habitat, or wildlife were foreseen if the Applicant follows BMPs outlined in the Report, CCLUO 2.0, and other agency guidelines. By following such BMPs, any environmental effects can be mitigated and a “neutral or negative impact” can be achieved.

Recommended BMPs include, but are not limited to, the following:

- Maintaining all appropriate riparian buffers
- Implementing BMPs to prevent sediment, fuels, or contaminants from entering the surrounding terrestrial environment
- Replacing any undersized culverts at relevant stream crossings
- Monitoring for and controlling invasive species according to the Project-specific *Invasive Species Control Plan*, particularly during site development
- Limiting noise-producing construction activities to September 1 – January 31 to avoid disturbance to migratory nesting birds, and/or conduct nesting bird surveys prior to construction activities if they fall outside of this timeframe

The Report also listed that most sensitive species or listed special-status plant species had a “low” or “none” potential of occurrence, with a few exceptions. The golden eagle and Cooper’s hawk both had a “moderate” potential of occurrence in the Project area and nearby vicinity. As such, a focused raptor survey set was recommended. The initial survey was conducted in September 2021 with a follow-up survey scheduled for February 2022. The nearest Spotted Owl activity center was approximately 2 air-miles from the Project site (as shown on map in the Report).

The only sensitive faunal species with *evidence* of presence in the Project area is the American badger. The Report recommends that pre-construction surveys should be completed by a qualified biologist, before site development occurs. If the survey/s finds active dens within the Project site badger relocation (by a qualified professional) should occur to other onsite suitable habitat.

Protocol-level floristic surveys were performed on two separate occasions in March and June 2021 in order to capture the potential seasonal presence of special status plant species. No special status communities or habitats were observed during these surveys and the only sensitive species observed was a Monterey cypress (*Hesperocyparis macrocarpa*) adjacent to the Project area. This tree is believed to be a planted ornamental and should not be affected by Project activities.

2.10. ARCHEOLOGICAL & HISTORICAL RESOURCES

A cultural resources survey and assessment of the property was performed in 2020. No artifacts, features, or sites which would be considered an historical resource for the purposes of CEQA

were identified during the field survey or found during the background investigation associated with the assessment. Additionally, no tribal cultural resources (PRC §21074) were found or appear to be present within the Project area, nor are they suspected within 600 feet of the Project site. Please see the associated *Cultural Resources Report* for the property. Notwithstanding the above, if in the course of site development activities or normal site operations archaeological and paleontological resources are discovered, all activities shall comply with CCLUO §55.4.12.1.15 and SWRCB Order No. WQ 2019-0001-DWQ Attachment A, §1.22 and §1.23.

2.11. HAZARDOUS MATERIALS

A site record search of the EnviroStor database was conducted for the property. This was done to satisfy requirements of CCR Title 3, Div. 8, Chpt. 1, §8102 and CCLUO §55.4.12.1.11. No hazardous materials have been documented at the site or within a 5,000 ft radius. Please see *EnviroStor_105-101-011*.

3. DESCRIPTION OF FACILITIES & ACTIVITIES

3.1. CULTIVATION

3.1.1. GARDEN AREAS

Cultivation will occur in open-air gardens totaling 217,800 sf (5 ac). All cultivation will occur with drip irrigation in amended native soil or in pots in native and/or imported soil, depending on cultivation method. The Project proposes one large outdoor full-sun garden plot, one area of stand-alone greenhouses, and one area of gutter-connect greenhouses. Canopy/cultivation area calculations are based on the footprint of each greenhouse, where applicable. The Applicant intends to permit all greenhouse structures as “Ag-exempt” under HCC. Greenhouses will be equipped with air ventilation systems and automatic blackout tarp systems. Details of each area are described below, with a corresponding ID for Site Plan reference.

3.1.1.1. Full-sun outdoor (OD-1)

130,680 sf (3 ac) in ± 10 acre garden area. Plants are 6 ft on center apart with 16 ft on center between rows. Layout is approximately 45 rows at 600 ft and 1-2 additional rows totaling 731 ft.

3.1.1.2. Light-deprivation greenhouses (GH-1)

43,560 sf (1 ac) of stand-alone greenhouses. Seventeen (17) greenhouses measuring 105' X 24' and one (1) greenhouse measuring 30' X 24'. Cultivation will use light-deprivation techniques without the use of artificial light in the canopy area.

3.1.1.3. Mixed-light gutter-connect greenhouses (ML-1)

43,560 sf (1 ac) rigid plastic greenhouses that share rooflines. Dimensions are 217.8' X 200' (total gutter-connect greenhouse area is 325' X 200' with non-cultivation space reserved for nursery activities; see below). The floor of the greenhouse assembly will be gravel with radiant heating installed.

3.1.2. ON-SITE CULTIVATION SUPPORT ACTIVITIES

3.1.2.1. Drying

16,000 sf drying and storage. Four (4) buildings, each measuring 40' X 100' (4,000 sf). Buildings are proposed as steel buildings with concrete slabs. The buildings will be installed with temperature controls (heating, cooling, dehumidifying) in order to properly cure cannabis, but which are not intended for human occupancy. The Applicant intends to permit all drying and storage structures as "Ag-exempt", and will provide a current Title 24 Building Energy Requirement for Plant Processing exemption letter from a Qualified Energy Consultant.

3.1.2.2. Processing & Packaging

One (1) 3,000 sf indoor processing facility with building dimensions 100' X 30'. The building will be permitted commercial and is proposed as a steel building with concrete slab. (Space is also shared with commercial processing activities, see below.)

3.2. CANNABIS SUPPORT FACILITY – OFF-SITE PROCESSING CENTER

One (1) 3,000 sf indoor commercial processing facility will process cannabis from other local farms and licensees, as well as cannabis produced on-site. The facility will include spaces for trimming, packaging, and employee break and restroom areas. The facility will be equipped to meet all applicable local and state building codes and guidelines for commercial buildings, including ADA requirements. Total dimensions are 100' X 30' with a breakdown of areas by activity listed below. All given areas are approximate. Please see *Cisco Farms Processing Building Detail* for basic draft floor plan.

- Processing and packaging activities, 2,100 sf
- Employee kitchen and breakroom, 300 sf
- ADA-compliant restroom with shower, 80 sf
- Secondary restroom, 40 sf
- Office, 80 sf
- Storage areas, 80 sf

3.3. CANNABIS SUPPORT FACILITY – NURSERY & COMMUNITY PROPAGATION CENTER

This will be operated as a state-licenses commercial nursery facility. The purpose of this facility is two-fold: 1) focus on the production of clones and immature plants for commercial wholesale and/or transfer to distributors and cultivators, and 2) create space for other local cultivators to house mother plants, clones, and immature plants. In totality, this nursery facility is referred to as the “commercial nursery” on the Site Plan and is divided into two main areas. Details of each area are described below, with corresponding ID for Site Plan reference.

3.3.1. GREENHOUSES (CN-1)

40,320 sf space in sixteen (16) greenhouses. Dimensions of each greenhouse are 105’ X 24’.

3.3.2. INDOOR (CN-2)

6,000 sf indoor space in two (2) buildings, each measuring 100’ x 30’.

3.3.3. GUTTER-CONNECT GREENHOUSES (N-3)

Additional 21,440 sf of nursery space in gutter-connect greenhouses. Dimensions are 107.2’ X 200’ (total gutter-connect area is 325’ X 200’; other space is occupied by mixed-light cultivation). This Project aspect is proposed for 2026 and beyond and will only occur if adequate grid or on-site renewable energy is sufficient for this Project component.

3.4. TRANSPORT-ONLY SELF DISTRIBUTION

The Applicant intends to obtain licensure from the state for Transport-Only Self Distribution. The only physical space required for such activity is a records storage area, which will occur in the small office in the processing building. This Project aspect is included so that it may be included in the CEQA analysis and review of the entire Project.

4. RELATED PROJECTS/APPLICATIONS

The proposed Project contains elements that may involve other current or proposed cannabis cultivation projects under the responsibility of the Applicant’s designated representative (Karl Benemann). The other projects are located within 1 air-mile of the proposed Project. Shared elements include nursery and processing activities. The Applicant may produce plants at the Project site destined to be grown at the other farm sites and/or may process at the Project site cannabis grown at the other farm sites. Likewise, the other sites may provide plants or processing services for the proposed Project during the period it takes for the site to become fully operational following permit approval. The other nearby farm sites are briefly described below.

4.1. CUP-16-125 ON APN 105-111-016

22,000 sf light-dep outdoor cultivation, 1,841 sf mixed-light cultivation, and 4,067 sf full-sun outdoor cultivation – approved October 2018. Minor deviation PLN-2020-16686 was approved March 2021.

4.2. PLN-2021-17034 ON 105-111-001 ET AL.

Proposed project for 43,560 sf mixed-light cultivation, 5,000 sf indoor cultivation, enclosed (wholesale) nursery, commercial processing, and distribution – application submitted February 2021.

CISCO FARMS INC.

PLN-2021-17384 CUP

APNs 105-101-011, 104-232-005, 104-191-001

CULTIVATION & OPERATIONS PLAN – UPDATED 12-08-21

Submitted to:

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1. INTRODUCTION

1.1. PURPOSE

This Cultivation and Operations Plan is intended for Cisco Farms Inc. (the “Applicant”) on APNs 105-101-011, 104-232-005, and 104-191-001 (the “Property”; one legal lot as defined by Humboldt County Code (HCC). It is structured to address Performance Standards set forth in Humboldt County’s Commercial Cannabis Land Use Ordinance (CCLUO), No. 2599 (aka "Ordinance 2.0”) §55.4.12, as well as other requirements set for the by the County Planning Department). The specific Performance Standard that is addressed by each section is listed in the section title.

1.2. EXECUTIVE SUMMARY

Cisco Farms Inc. is seeking Conditional Use Permits for 5 acres of new open-air cannabis cultivation and commercial nursery, and Zoning Clearance Certificates for two (2) Cannabis Support Facilities: commercial processing and Community Propagation Center on APNs 105-101-011, 104-232-005, and 104-191-001. Of the 5 acres, 3 acres will be full-sun outdoor, 1 acre light-deprivation in greenhouses with no artificial light, and 1 acre mixed-light in gutter-connect greenhouses with supplemental lighting not to exceed 25 watts/sf. Cultivation will result in 1-3 cycles annually, depending on the method. Nursery facilities total 67,760 sf and include 40,320 sf of greenhouses, 21,440 sf of gutter-connect greenhouses, and 6,000 sf of indoor/enclosed space. The Project proposal includes permitting of proposed facilities and structures that are appurtenant to the cultivation activities, which includes 19,200 sf of drying facilities. Drying and processing will initially occur off-site then move to on-site once these facilities have been constructed. A 3,000-sf commercial processing building is also proposed for both cannabis produced on-site and that produced by other cultivators.

All irrigation water will be sourced from rainwater catchment. A groundwater well will provide water designated for human use and sanitization only. A total of 2,850,000 gallons of water storage is proposed. Water will be stored on-site in one agricultural pond with 2,650,000-gallon capacity, and forty (40) plastic tanks, each with 5,000-gallon capacity (total 200,000 tank capacity). Total annual irrigation water use is projected to be 2,154,095 (8.3 gal/sf cultivation, 5.1 gal/sf nursery. Groundwater well use for human use and sanitization will be 111,709 gallons. Power will come from PG&E service and onsite renewables (solar and/or wind). There will be a maximum number of 34 employees during peak operations, with 12 during all other times. Approximately 1,280 sf of farmworker/ employee housing is proposed in modular units that will accommodate up to 8 persons. Domestic water for the housing will be sourced from the well and an OWTS will be installed. Access to the site is from Chambers Road, a paved County-maintained road. In addition, a Transport-only Self Distribution license will be sought at the state level in order to satisfy operational logistics.

1.3. COMPLIANCE & INSPECTIONS (§55.4.12.1.1-7, §55.4.12.2.1-4,7)

The Applicant will comply with all environmental protections and standards, performance standards, and associated reporting, payment of fees, inspections, and licenses in conjunction with the following regulations and/or agencies, as applicable:

- Humboldt County CCLUO 2.0
- Humboldt County Planning & Building Department (the “Department”)
- California Department of Food and Agriculture (CDFA; CCR Title 3, Div.8, Cpt.1 §8000-8607)
- Bureau of Cannabis Control (BCC)
- California Department of Public Health (CDPH)
- California Department of Cannabis Control (July 2021 and thereafter)
- State Water Resources Control Board (SWRCB; Order No. 2019-0001-DWQ)
- California Department of Fish & Wildlife (CDFW; CCR Title 14 § 722, Standard LSAA for Cannabis Cultivation & Non-cannabis, App. ID: EPIMS-18009)
- California Department of Pesticide Regulation (CDPR)
- California Department of Tax and Fee Administration (CDTFA)
- Humboldt County Treasurer-Tax Collector
- Humboldt County Agricultural Commissioner
- California Department of Industrial Relations, Cal-OSHA, US Department of Labor, and any other employment regulations and agencies

The Applicant consents to inspections and terms thereof outlined in CCLUO 2.0 as well as other inspections as described in various documents put forth by the agencies listed above.

The Applicant will register as an “agricultural employer” with the California EDD upon imminent receipt of County permit/s.

1.4. RELATED OPERATIONS

The chief officer of Cisco Farms Inc. also holds this position within several other cannabis operations. Of highest interest to this application are current and proposed operations on neighboring and/or nearby parcels in the Petrolia area on APN 105-111-016 (CUP-16-125) and 105-111-001 (PLN-2021-17034). For this Project, the Applicant intends to pursue permitting at the state level which will allow transfer of clones and juvenile plants from on-site nursery operations to the other sites, as well as receiving harvested cannabis for drying and trimming from the other sites. Similarly, during the initial years of this Project while the facility is being constructed, the Applicant may send harvested cannabis to the other sites – where state permitting allows – for drying and trimming.

2. SITE INFORMATION

2.1. SITE HISTORY

The Property is part of a larger historic cattle ranch consisting of several large parcels. An application for a Notice of Merger (NOM) was submitted to Humboldt County Planning Department in July 2020 and approved in early June 2021 (PLN-2020-16522). The NOM reorganized several parcels within the ranch to form two new tracts in order to meet zoning requirements for minimum parcel size, and to meet specific CCLUO 2.0 §55.4.6.1(c) eligibility for cannabis operations.

The ranch is held in a Williamson Act Land Conservation contract (Ranch ID 236) between the County and the Benemann Family Revocable Trust (please see additional document). Cannabis operations will not affect the contract terms and stock operations will continue on in the same capacity and manner as previous years, including on the parcels centric to cannabis operations.

2.2. SITE CHARACTERISTICS

The Project site consists of a flat agricultural field predominated by native and non-native pasture grasses. The site is immediately bordered to the north and south by narrow riparian bands of trees occurring along Class I and II streams, respectively. More extensive woodlands occur approximately 0.15 miles and 0.5 miles to the northeast and east, respectively. Climate at the site is dominated by coastal and geographic influences, with year-round strong winds. Due to this weather feature, the Applicant intends to erect wind fencing and/or plant windrows where necessary around the Project site.

2.3. ROAD SYSTEMS (§55.4.12.1.8)

2.3.1. ACCESS ROADS & DRIVEWAYS

A private driveway provides access to the Project site from Chambers Road, which is a paved county-maintained road developed to the Category 4 Standard up to the edge of the Property boundary. Please see the *DPW Road Evaluation Report* prepared by a licensed engineer included in the application package. The driveway only provides access to the Property and one other neighboring parcel. The length of the driveway to the project site is approximately 0.75 miles. A gravel-surface access road will surround the entirety of the Project site (except for pond), contributing an additional length of ~0.75 miles.

Chambers Road and the private driveway will see routine use during project operations. Traffic will moderately increase above “routine use” along Chambers Road and the private driveway during the initial phase of the Project, when construction and site preparation activities are taking place. Traffic will also increase year-round from current levels as a result of additional employees traveling to and from the site, and other cultivators traveling to and from the

Community Propagation Center. Peak use time is estimated to be between 6:00 – 8:00 AM and 5:00 – 6:00 PM. Traffic shall observe a 10 mph maximum speed limit on the private drive and 25 mph maximum speed limit on Chambers Road.

The Applicant shall maintain the intersection of the driveway and Chambers Road in accordance with the requirements of HCC. These include ensuring all fences and gates are not located within the County right-of-way and will not impede traffic when being open and closed. The visibility triangle will be maintained in accordance with HCC §341-1. No construction or new buildings are proposed within the visibility triangle. If any fencing is installed, it shall be of a nature and type that does not obstruct vision, and all brush and vegetation shall be kept mowed at this intersection. The Applicant shall pave the driveway apron for a minimum width of 18 ft and length of 50 ft to meet current County standards for a commercial driveway.

The driveway surface beyond the paved apron and will be maintained so as to minimize dust during the season of use, in accordance with SWRCB Order WQ 2019-0001-DWQ.

2.3.2. STREAM-CROSSINGS

Three (3) stream-crossings exist on the Property, two of which are along the access driveway, both over Class II watercourses. The southernmost of these crossings is a bridge that was replaced as part of a state-funded fisheries restoration project in 2008; it is functioning with no evidence of erosion. The second crossing is a culvert that is currently functioning but needs to be replaced with a larger-sized culvert in order to meet the capacity for a 100-year streamflow event.

The third stream-crossing is located near the residential portion of the Property on the southern parcel, and is used for ranching activities and general property access. The crossing contains a functioning culvert that is undersized. The culvert will be upgraded to a larger size that will meet 100-year streamflow event capacity.

The crossing assessments and upgrade designs were completed by a qualified licensed engineer in accordance with CDFW guidelines and requirements. A standard Lake and Streambed Alteration Agreement (LSAA) application that includes the crossing upgrades, as well as general cannabis activities, was submitted to CDFW in May 2021 and is pending approval (Application ID: EPIMS-18009). The proposed stream-crossing upgrades shall only occur on in-use roads. All disturbances associated with this aspect of the Project will be limited to the road, stream channel, and banks immediately adjacent to the individual crossings for the purposes of storm-proofing and upgrading the crossings. Work will only occur during the period of June 15th through October 31st (or first significant rainfall) to limit and avoid impacts to aquatic habitat and salmonids. Vegetation will only be removed from sites where it is necessary for the implementation of effective storm-proofing treatments, where erosion is likely to occur, or where it is growing on anthropogenically placed fill material. All crossing sites where upgrades are proposed dry up in the later summer months such that water is not expected to be present

within the channel during the working period required for the culvert replacement, so dewatering will not be necessary. All stream-crossings will be monitored and maintained for debris as part of winterization procedures prior to November 15, and regularly thereafter prior to and just after large storm events, or every 2 weeks, whichever is more frequent.

In addition to the upgrades listed above, several minor driveway upgrades, such as rolling dips and additional ditch relief culverts, will be done to hydrologically disconnect road reaches from watercourse crossings and alignments, thereby further reducing anthropogenic impacts and sediment delivery potential to the Mattole River watershed from the rural road network on the Property.

2.3.3. PARKING PLAN & FIRE-APPARATUS TURN-AROUND

A total of seventeen (17) designated parking spaces in a perpendicular fashion will be located in three main locations around the Project site. Eight (8) spaces and one (1) ADA-compliant van-accessible space will be located adjacent to the processing building at the southwestern corner of the site. Four (4) spaces are proposed in the northeastern corner of the site, and four (4) in the southeastern corner. The gravel access road will also provide additional opportunities for parking along its length in a parallel fashion. Parking is based on all activities being conducted by a maximum of 14 employees during peak times. If additional employees are hired in the future, the parking area will be enlarged to accommodate more vehicles, if applicable, subject the requirements of HCC §313-109.1. Parking spaces shall be without cover with the area of each parking space 9 ft x 18 ft, and each ADA space 14' X 18' to meet both CCR and HCC requirements.

The turn-around area is a hammerhead/T configuration and is located off a spur from the southeastern corner of the access road. The turn-around area is at least 60 ft in length and as wide as the driveway – which will be approximately 12 ft – in order to meet CalFIRE SRA requirements.

The parking and turn-around areas shall be maintained so as to minimize dust during the season of use, in accordance with SWRCB Order WQ 2019-0001-DWQ.

3. ENVIRONMENTAL STANDARDS

3.1. STORMWATER MANAGEMENT PLAN – SITE DRAINAGE, RUNOFF, & EROSION CONTROL MEASURES (§55.4.12.1.12)

3.1.1. SITE DRAINAGE & RUNOFF

The Project site consists of a flat agricultural field predominated by native and non-native pasture grasses. The Project site is immediately bordered to the north by a Class I stream, East Mill Creek, a tributary to the Mattole River. The site is bordered to the south and southeast by

un-named Class II and Class III drainages that are themselves tributaries to East Mill Creek. These creeks facilitate overall property drainage during the wet season. The Project will not divert water from any watercourses, and will not require any grading work to facilitate drainage. All cultivation will occur in the proposed open-air cultivation areas on relatively level ground with drip irrigation systems. All cannabis activity areas are located at least 150, 100, and 50 feet from the Class I, Class II, and Class III tributaries, respectively.

The slope of the cultivation site is approximately 2.7% both east-west and north-south. Surface water is naturally absorbed and recharged back into the existing landscape without channelization. The Project will not result in discharges that could affect surface water or groundwater quality. Irrigation water will be applied at agronomic rates via timed drip irrigation so as to minimize runoff. Any detected leaks in the irrigation system/s shall be fixed immediately so as to reduce runoff from such incidents.

Pond overflow will be constructed consistent with engineering professional standards and relevant local and state guidelines. The overflow consists of an armored (rocked) channel that empties at the natural grade and dissipates water back into the existing landscape. The pond was designed by a qualified licensed engineer, in accordance with HCC and SWRCB regulations.

All water storage features shall have emergency shut-off valves (timed or manual), and/or have float valves installed where appropriate, in order to reduce run-off from such features in the event of a leak or human error.

All runoff from soil and garden wastes shall be minimized by storing such wastes on low-gradient slopes in distinct compost bins and/or areas. Straw and/or straw baffles shall surround compost bins, areas, and piles, as may be deemed necessary. Drainage and potential runoff associated with fertilizer, amendment, and fuel storage shall be minimized through the use of secondary containment systems within proper covered off-the-ground storage.

With regard to access roads, the culvert replacements and driveway upgrades mentioned previously will further minimize runoff and sediment delivery potential to the watercourses on the Property. All drainage features and potential sources of runoff shall be inspected on a weekly basis during the wet season and after all significant storm events.

The Applicant has enrolled in SWRCB Order No. 2019-0001-DWQ and a Site Management Plan (SMP) is being developed in accordance with the General Order and Cannabis Cultivation Policy. The SMP includes erosion and sediment control Best Practicable Treatment or Controls (BPTCs) designed to prevent, contain, and reduce sources of sediment.

3.1.2. EROSION CONTROL MEASURES

Topsoil preservation measures include planting cover crop (clover and other species) during the fallow season, minimal tilling on calm days during garden preparation and planting, and mulching

or utilizing weed mats where appropriate. For minimizing erosion relating to roads and driveways, road conditions shall be inspected on a weekly basis during the year, and after major storm events during the wet season. Any road improvements shall utilize angular rock, outsloping, rolling dips, and water bars, as appropriate.

At all areas where excavation of soils, ground disturbance, grading, or spoil piles are proposed, best practicable treatments and controls (BPTCs) will be utilized immediately following such activities to ensure such features do not deliver sediment to surface waters. BPTCs include the use of erosion control seed, straw wattles, tarps and mulching with weed free straw. Application rates for erosion control native seed mix and mulch/straw/hay will be no less than 50 lbs/acre and 4,000 lbs/acre, respectively.

3.2. WATER SOURCE, STORAGE & USE

3.2.1 WATER SOURCE

All water for irrigation will be sourced from rain catchment, and thus, is not subject to the SWRCB Department of Water Rights Cannabis SIUR Program guidelines and restrictions. Trucked water may only be used for emergency situations, as defined by CCLUO §55.4.12.2.5.

3.2.1.1. Rainwater Harvest

The Project has the potential to source all cannabis irrigation water needs from rainwater harvest. Three precipitation data sources were used to assess this aspect of Project feasibility. Using several sources was done to best reflect Project site conditions in elevation and geography in order to obtain the most accurate rainfall data for average and drought years. Table 1 shows the Project's catchment surfaces and their respective footprints with the corresponding individual and combined collection potentials for an average year and the driest years by data source. The various data sources are described as follows.

PRISM Climate Data¹

PRISM data sets are the most widely used spatial climate data sets in the United States and are the official spatial climate data sets of the USDA. PRISM provides 30-year average monthly and annual precipitation (1981-2010 is the most recent 30-year dataset currently available on PRISM). As elevation is the most important factor in the distribution of climate variables, the 800-meter resolution was used to match the Project elevation as closely as possible; PRISM data are for 259 ft elevation and the elevation at the center of the Project site is approximately 295 ft. PRISM data were used to determine monthly and annual averages. To determine the driest year, PRISM time series data were used (which uses an elevation of 928 ft). The driest year was 2013 with 29.33 inches of precipitation.

¹ <https://prism.oregonstate.edu/explorer/>

Mattole NCWAP²

Appendix C of the North Coast Watershed Assessment Program (NCWAP): Mattole River Watershed Assessment Report provides Department of Water Resources data that is from a weather station that was in operation from 1958 – February 1995. It was at an elevation of 175 ft and distance of 1.25 airmiles from the Project site. Only annual data are available from this source. The driest year on record from this station was 1977 with 27.24 inches of rainfall; this is the lowest precipitation amount found from all the available data sources.

CoCoRaHS Petrolia Station Data³

CoCoRaHS is an acronym for the Community Collaborative Rain, Hail and Snow Network. A station is currently located approximately 1.1 airmiles from the Project site at an elevation of 92 ft. The station has been in continuous operation since September 1, 2016. As both monthly and annual data are provided, the 2020 dataset was used in analysis as this year was a notable recent dry year.

² Downie, Scott T., C.W. Davenport, E. Dudik, F. Yee, and J. Clements (multi-disciplinary team leads). 2002. Mattole River Watershed Assessment Report. North Coast Watershed Assessment Program, p. 441 plus Appendices. California Resources Agency, and California Environmental Protection Agency, Sacramento, California.

³ <https://wys.cocorahs.org/>

Table 1. Rain-catchment Surfaces and Water Collection Potential (in Gallons) for Average and Dry Years for CISCO FARMS INC. on APN 105-101-011 et al.

Rain-catchment Facility	Catchment Surface Material	Footprint (sf)	PRISM 30-Yr Average (73.93 in)	PRISM Record Low (2013: 29.33 in)	CoCoRaHS Record Low (2020: 35.4 in)	NCWAP Record Low (1977: 27.24 in)
Pond	EPDM, polyethylene	46,367	2,136,878	847,756	1,023,204	787,347
Gutter-connect Greenhouses	acrylite, acrylic, polycarbonate	65,000	2,995,607	1,188,437	1,434,390	1,103,751
Stand-alone Greenhouses	polyethylene	43,560	2,007,518	796,436	961,262	739,683
Drying Buildings	galvanized steel, Galvalume	19,200	884,856	351,046	423,697	326,031
Nursery & Processing Buildings	galvanized steel, Galvalume	6,000	276,518	109,702	132,405	101,885
TOTAL COLLECTION POTENTIAL (GAL)			8,301,376	3,293,377	3,974,959	3,058,697

Collection capacity was determined using the following equation:

$$\text{Rainwater collected (gal)} = \text{catchment surface area (ft}^2\text{)} \times \text{Rain (in)} \times \text{Conversion factor}$$

Where the *Conversion factor* is: $0.623377 = \left(\frac{1 \text{ in}}{12 \frac{\text{in}}{\text{ft}}}\right) \times \left(\frac{7.48052 \text{ gal}}{1 \text{ ft}^3}\right)$

The total amount of water required for cannabis irrigation plus pond evaporation is 2,832,025 gallons. If all catchment surfaces are employed, only 25.22 inches of rain is required to meet this amount, and the average annual rainfall of 73.93 inches is more than enough. Even in the driest years on record – NCWAP 1977, PRISM 2013, CoCoRaHS 2020 – enough precipitation will be received to meet Project demand.

One can see that in a drought year, all the listed catchment surfaces will be utilized in order to meet water needs, while in an average or particularly wet year, only the pond and the drying buildings may need to be used for catchment. Once storage facilities are at capacity, various catchment surfaces may be disconnected in order to avoid excess pond overflow. The Applicant will monitor water storage levels throughout the wet season to make such determinations in a timely manner.

3.2.1.2. Groundwater Well

Non-irrigation water is proposed to be sourced from an on-site well. Non-irrigation water totals 111,709 gallons and is designated for the following purposes: drinking, restroom and shower facilities, processing (e.g. handwashing, surface and tool cleaning), and farmworker/employee residence use. It is necessary to source such water from a well, as issues are present around the legality and safety of using stored rainwater for human consumption and sanitization. The well will be used and operated in compliance with any local and/or state regulations and/or restrictions in place at the time of use.

3.2.1.3. Imported Drinking Water

Drinking water for employees and resident farmworkers may be imported (i.e. bottled water) if requirements in effect in the future prevent the well from being utilized as a source for such water.

3.2.2. WATER STORAGE (§55.4.12.7.1.c, §55.4.12.8)

A total of 2,850,000 gallons of water storage is proposed. Water will be stored on-site in one agricultural pond with 2,650,000-gallon capacity, and forty (40) plastic tanks, each with 5,000-gallon capacity (total 200,000 tank capacity). Two (2) of these tanks shall be reserved for fire suppression and prevention uses (total 10,000 gal).

3.2.3. WATER REQUIRED

A total of 2,953,733 gallons will be required for all Project activities and associated demands, such as evaporation, farmworker/employee residential use, and fire suppression. Please see Table 2 for monthly water requirements by category (fire suppression is not included).

3.2.3.1. Evaporation

Evaporation has been calculated from May – September using local estimates of approximately 0.5 ft per month. Please see Table 2.

3.2.3.2. Processing

Processing water use primarily includes employee hydration and employee and workspace sanitation. Processing water use averages 200 gallons per week when activities occur (Table 2).

3.2.3.3. Resident Employees

Farmworker housing water use is estimated at 40 gal/day per person. This is for all domestic use, including but not limited to: drinking, toilet facilities, laundry, other sanitation, pets, and small vegetable garden uses. Farmworker water use is shown in Table 2.

3.2.3.4. Fire Suppression

A designated amount of water shall be kept on-site for fire suppression purposes. This amount is 10,000 gallons and will be reserved in two (2) plastic tanks labeled as "FIRE".⁴ The water tanks containing the designated water supply shall be linked to a standpipe that meets CCR Title 14, Division 1.5, Chapter 7 requirements (CalFIRE SRA Fire Safe Regulations) and HCC § 3114-4 (SRA Fire Safe Regulations).

Table 2. Monthly and Annual Water Requirement (in Gallons) by Demand Category for CISCO FARMS INC. on APN 105-101-011 et al.

Month	All Cultivation	Pond Evaporation	Processing	Employee Residence	Total Water Required
January	11,530	-	886	4,960	17,376
February	28,862	-	800	4,480	34,142
March	67,067	-	886	9,920	77,872
April	245,149	-	857	9,600	255,606
May	321,237	173,424	886	9,920	505,467
June	338,338	155,302	857	9,600	504,097
July	413,218	136,775	886	9,920	560,798
August	372,951	116,066	886	9,920	499,823
September	275,926	96,362	857	9,600	382,745
October	65,121	-	886	9,920	75,927
November	9,716	-	857	8,480	19,053
December	4,982	-	886	4,960	10,827
TOTAL	2,154,095	677,929	10,429	101,280	2,943,733

Note: Components may not sum to totals because of rounding.

⁴ The 10,000 gallons reserved for Fire Use only is not included in Table 2, as it will hopefully be a one-time input and will not be used or required on an annual basis.

3.2.4. WATER USE (§55.4.12.7)

A total of 2,154,095 gallons of water will be required annually for cannabis irrigation activities at full capacity. See Tables 3 and 4 for a breakdown of use by cultivation area and water use per square foot by cultivation area.

3.2.4.1. Cultivation of Mature Plants

Water will be used on-site for crop irrigation, fertilization, and pest management activities. Water use amounts associated with cultivation have been calculated based on the number of plants expected to be grown and number of cycles at maximum capacity. This amount per plant includes regular crop irrigation in addition to feedings (late-March through early-November) and < 1 gallon per plant at transplant times. Throughout their life-cycle, rooted individual plants will be watered only by focused drip irrigation or hand-watering methods. Both methods will ensure maximal water use efficiency and that no runoff is created. Clones in the nursery operations will be watered via misting methods. Cultivation-specific water use by method is shown in Table 3.

3.2.4.2. Commercial Nursery

The watering regime for the nursery is based on the number of clones and potted juvenile plants in aggregate for any one week during the year. Water use is estimated based on an average production capacity of 8,450 clones per week year-round and an average weekly holding of 13,510 small pots and 8,454 1-gallon pots during February – September (Table 3).

Table 3. Monthly and Annual Water Use for Irrigation (in Gallons) by Cultivation Area for CISCO FARMS INC. on APN 105-101-011 et al.

Month	Mixed-Light	Light-Dep	Full-Sun Outdoor	Nursery	Total Cultivation
January	-	-	-	11,530	11,530
February	-	-	-	28,862	28,862
March	11,575	-	-	55,492	67,067
April	112,011	70,438	-	62,700	245,149
May	117,239	116,771	20,211	67,016	321,237
June	113,878	112,568	67,998	43,894	338,338
July	117,239	116,646	128,600	50,733	413,218
August	117,674	116,460	128,600	10,216	372,951
September	47,231	99,068	124,452	5,174	275,926
October	-	-	61,767	3,354	65,121
November	-	-	6,849	2,867	9,716
December	-	-	-	4,982	4,982
TOTAL	636,847	631,951	538,478	346,819	2,154,095

Note: Components may not sum to totals because of rounding.

Table 4. Water Use per Square Foot by Cultivation Area for CISCO FARMS INC. on APN 105-101-011 et al.

Mature Plant Cultivation	Mixed-Light Greenhouse (ML)	14.6	8.3
	Light-Dep Greenhouse (GH)	14.5	
	Full-Sun Outdoor (OD)	4.1	
Nursery			5.1
TOTAL			7.5

3.2.5. IRRIGATION PLAN (§55.4.12.7.1.A,B,C)

All irrigation water will be sourced from the pond and storage tanks designated for such, which will have a total combined capacity of 2,840,000 gallons. A maximum of ~115 gallons per mature full-sun plant are anticipated (Table 5) and ~27 gallons per plant in light-deprivation (“light-dep”) and mixed-light operations (3 rounds, approximately 8-10 weeks each; Table 6). All water shall be applied at agronomic rates. For clone rearing, a misting system will be used that applies water at a rate of approximately 0.042 gallons (0.67 cups) per tray per week. For cultivation beyond the clone stage, the Project will utilize focused drip irrigation systems and/or top feed hand watering to provide direct-to-root irrigation with minimal or no water waste. A limited amount of hand-watering will be done at time of transplant for full-sun plants (~1 gal per plant) and during any top-dress fertilization or amendment. All irrigation via drip method is limited by timers, so a precise amount of water per plant is applied. Timers also have the benefit of limiting water loss via any spontaneous leaks that may arise.

Table 5. Drip Irrigation Rates for CISCO FARMS INC. for Full-Sun Plants

Dates (approximate)	# Weeks	Water Amount (gal/plant/week)	Total (per plant)
May 20 - Jun 15	3.86	2.5	9.6
Jun 16 - 30	2.14	4.0	8.6
Jul 1 - Sep 30	13.14	6.0	78.9
Oct 1 - 31	4.43	4.0	17.7
TOTAL			114.8

Table 6. Drip Irrigation Rates for CISCO FARMS INC. for Light-deprivation and Mixed-light Plants

# WEEKS (AVG)	WATER AMOUNT (GAL/PLANT/WEEK)	TOTAL (PER PLANT)
9	3.0	27.0
TOTAL		27.0

3.2.6 WATER CONSERVATION MEASURES (§55.4.12.7.1.D)

On-site water management and conservation activities include:

- Timed drip irrigation applied at agronomic rates
- Any exposed soils are mulched and/or cover-cropped to reduce evaporative loss
- Groundcover and/or mulch used in cultivation area
- Substantial percentage of water sourced from rainwater catchment
- Float valves installed in all tank inlets
- Regular monitoring for leaks at designated intervals
- Using mixed-light and/or deprivation techniques to produce smaller plants which require less water per plant throughout the season
- Low flow toilets & shower in employee bathrooms and housing

3.2.7. MEASUREMENT & RECORDKEEPING (§55.4.12.7.5,6,7)

Water meters will be installed at the well and all exit points from storage facilities (i.e. pond and tanks), to account for and report actual water used, which will be recorded weekly and reported in accordance with local and state guidelines. The water level in all storage facilities will be visually monitored once per week during the spring/summer/falls months and at least 2 times per month during the winter months, and it shall be recorded at least once per month. Safety valves (volume or time-oriented) shall exist at all storage facility main exit points so that in the event of a leak, only a limited amount of water can be lost.

During the spring/summer/fall months, leaks will be monitored for at least once per week in all lines and fittings, or more frequently after unusual wind events. During other times of the year, leaks will be checked for through regular visual inspection of storage facilities and irrigation lines conducted at least 2 times per month, or after large storm events.

3.3. AGRICULTURAL CHEMICALS STORAGE & USE

When not in use, all nutrients, fertilizers and amendments (collectively “agricultural chemicals”) associated with cultivation will be stored in the westernmost drying/storage building in an enclosed, locked area designated as such. All agricultural chemicals associated with commercial nursery activities will be located within the indoor structures for each, respectively, within a locked cabinet and/or room. It is anticipated that most soil amendments will be purchased in bulk and immediately mixed into the soils or planting medium, so storage requirements for these particular compounds are minimal. If amendment storage is required, it will occur in the same locations mentioned previously. All agricultural chemical location storage locations shall have impervious floors and be completely protected from wind or rain to prevent any leachate from entering groundwater or any debris from entering surface waters. All agricultural chemicals shall

be contained within their original labeled containers and stored in accordance with manufacturer instructions, within secondary containment (bins). Pesticides will be stored in a separate compartment or bin from the fertilizers and amendments if their composition requires such measures.

BPTCs will be employed when storing, handling, mixing, applying and disposing of all fertilizers, pesticides and fungicides. All agricultural chemicals shall be applied according to manufacturer instructions and at manufacturers' suggested rates, or less. Application rates and times for all pesticides will be tracked and reported as required by CDPR and the County Agricultural Commissioner. Application rates for fertilizer will be tracked monthly in accordance with SWRCB requirements.

The Applicant already possesses a pesticide application certification (i.e. Private Applicator Certificate / PAC) received through the County Agricultural Commissioner. This PAC meets state DPR requirements for a Qualified Applicator License. Any applicable employees will also be trained to handle, mix, apply, and dispose of pesticides/fungicides with proper hand, eye, body, and respiratory protection in accordance with the manufacturer recommendations and CDPR requirements. Agricultural chemical safety procedures include fire safety, use of rubber (or similar material) gloves and respirators (if applicable), proper hand washing guidelines, and emergency protocols. The material safety data sheets (MSDS) for each chemical will be kept on site and accessible to employees. The Applicant and any employees will also be trained in spill prevention, countermeasures, and cleanup protocols should emergency arise. Spill kits will be available in areas designated for agricultural chemical storage. A shower will be located in the ADA bathroom in the processing building in the event of a spill or exposure resulting in skin contact.

The Applicant will use the following soil amendments/nutrients (or similar) for the proposed cultivation and nursery operations:

- Trace minerals mix
- Pacific oyster shell
- Gypsum
- Lime
- Dolomite
- Azomite

The Applicant anticipates using the following fertilizers/nutrients (or similar) for the proposed cultivation and nursery operations:

- Earth Juice Rainbow Mix Pro Grow
- Earth Juice Rainbow Mix Pro Bloom
- General Hydroponics Grow (various products)
- General Hydroponics Bloom (various products)

The Applicant will use the following pesticides for the proposed cultivation and nursery operations:

- Sulfur products (e.g. soaps, sprays)
- Neem oil and other plant oils (e.g. garlic, cottonseed, corn, soybean, clove)
- Green Cleaner
- Dr. Zymes
- Regalia and Regalia PTO (*Reynoutria sachalinensis*)
- Grandevo WDG and Grandevo PTO (*Chromobacterium subtsugae*)
- Venerate XC (killed *Burkholderia spp.*)
- Biological controls (e.g. ladybugs, predator mites, praying mantis)

Integrated pest management strategies that include chemical, biological, and cultural controls are used so that only affected areas are treated when there is an economic benefit. Pests and diseases are controlled with biological controls, bioinsecticides, and/or plant essential oils and/or beneficial bacteria. No rodenticides will be used on site. Please see the accompanying *Pest Management Plan*.

3.4. SOILS MANAGEMENT PLAN

Existing site soil is classified as not prime agricultural soils. Cultivation of mature plants will occur in amended native soil in tilled beds for full-sun plants. For light-dep greenhouse and mixed-light greenhouse operations, plants may be planted either in tilled beds using amended native soil or in pots using amended native soil or completely imported soil, or a mixture of both. Any imported soil used in pots will be recycled for on-site use in subsequent years.

There will also be input of imported soils to all cultivation areas on an annual basis when immature plants are transplanted into the canopy areas. Immature plants will be grown to a maximum size of 1-gallon bags or pots in the nursery in manufactured potting soil. It is estimated that up to 486 yd³ of soil per year may be imported for this use. Bulk soil will initially be deposited in the Soil Management Area designated on the Site Plan and then taken from there

to various on-site facilities, as needed. All imported soil will be incorporated into the cultivation areas and/or recycled for on-site use in subsequent years.

Commercial wholesale nursery activities will also require imported manufactured soil. It is estimated that 85 yd³ will be used for this purpose. It is anticipated that nearly all of this soil will be transported off-site when wholesale nursery plants are purchased by other cultivators or distributors.

Any remaining soil piles at the onset of the winter season (November 15 or the first fall rains, whichever is sooner) shall be tarped and surrounded by straw baffles. The cultivation area and all other disturbed areas will be seeded with cover crop in the fall of each year. Each spring, some amending of the native soil with composted manures and other agricultural minerals will take place, dependent on the results of yearly soil tests.

Other than through commercial wholesale plant transactions, no manufactured soil is expected to be removed from the site or disposed off-site.

3.5. WASTE / MATERIALS MANAGEMENT PLAN (§55.4.12.1.13)

3.5.1. CANNABIS-RELATED PRODUCTS

All employees will receive job-specific training on the proper handling of live plants and fresh and dried flower, trim, and any other non-manufactured cannabis products. Such training includes cultivation and harvesting techniques, hand tool use, and proper Personal Protective Equipment (PPE) storage and use.

3.5.2. AGRICULTURAL CHEMICALS

Relevant employees will be trained on the proper storing, handling, mixing, and application of all amendments, fertilizers, and pesticides, and proper PPE use. All agricultural chemicals will be applied according to manufacturer recommendations. Please see previous Section 3.3 for more details.

3.5.3. CULTIVATION & NURSERY PLANT WASTE

Vegetative matter such as root balls, branches, leaves, and other plant material will be composted on-site in designated compost areas located near each cultivation and nursery area. Each compost area will be approximately 20 ft by 20 ft; It is estimated 4 compost areas will be necessary (please see Site Plan for locations).

No materials associated with the cultivation and processing of cannabis will be burned (CCLUO §55.4.12.1.9).

3.5.4. SOLID WASTE

All other wastes, including cultivation-related (non-plant material) refuse, household refuse and recycling, plastics, packaging, irrigation, pots, lighting, pond liners, electrical fixtures, wiring, and fencing shall be collected in designated trash and recycling containers that are covered and will be located on-site within or adjacent to the following structures: westernmost drying/storage structure at the northern edge of the full-sun outdoor cultivation area, processing building, indoor commercial nursery buildings, and farmworker housing unit/s. The storage areas for trash and recycling will be covered and off the ground. The location of the receptacles shall prevent storm water contamination and leachate from entering or percolating to receiving waters. The containers will also be restricted from animal access. Solid waste and recycling will be hauled off-site by the Applicant at least 2 times per month, or as necessary. Please see the attached Site Plan for structure locations.

3.5.5. HAZARDOUS WASTE

Although their production is not anticipated, any hazardous wastes, such as fuels or solvents, shall be logged, stored in secondary containment, and taken to a County-approved hazardous materials collection facility, as appropriate. An EnviroStor Database search was performed, and no hazardous waste sites were found within at least a 5,000 ft radius of the site.

3.5.6. WASTEWATER / SEWAGE DISPOSAL PLAN

Since irrigation shall be applied at agronomic rates, no effluent from cultivation (cultivation wastewater) is anticipated at the site. For handwashing, toilet, and household effluent, an on-site wastewater treatments system (OWTS) is proposed that will service the processing area, kitchen, restrooms, and employee housing units. The OWTS shall be designed to accommodate the number of anticipated daytime and resident employees and processing facility. Please see the Site Plan for proposed leach field (septic drainfield) location. The Applicant will work with the County to ensure all necessary permits are on-file for these facilities prior to construction. The OWTS will be serviced by a licensed septic pumping professional at least once per year, prior to the winter period (November 15), or more frequently, as necessary.

3.6. LIGHT POLLUTION CONTROL PLAN (§55.4.12.4)

All lighting associated with cultivation, nursery, and processing activities shall be shielded by use of tarps or other covers, and, where applicable, window shades or blinds. No lighting will be used in Full-sun outdoor (OD-1) or Light-dep greenhouse (GH-1) cultivation areas. Mixed-light gutter-connect greenhouses (ML-1) will contain artificial lighting at an intensity not to exceed 25 watts/sf (CDFA Mixed-Light, Tier 2 maximum intensity). The gutter-connect greenhouses and any nursery greenhouse containing lighting shall be equipped with automated blackout tarp systems. The tarps will be deployed a minimum of one half-hour before sunset and one half-hour after sunset whenever supplemental lighting is in use. This will be so that no light escapes from sunset

to sunrise to meet LZ-0 and LZ-1⁵ standards, providing for a dark ambient environment. Exterior and task lighting shall only be used for basic human safety and basic operations. Exterior permanent artificial light fixtures shall exist only where necessary for safety, where mandated by codes, or where a discreet need is identified, shall be angled downward, and shall be extinguished when not in use.

3.7. NOISE SOURCE ASSESSMENTS & MITIGATION PLAN (§55.4.12.6)

Noise levels will increase for a brief period of time during construction activities throughout the phase-in period of the project for 1-5 years while the facilities are being constructed. Typical construction equipment may include a dozer and backhoe, although minimal grading and site preparation are anticipated due to the relatively flat topography of the site. Equipment noise is predicted to be a maximum of 85 dBA at a distance of 50 ft (with acoustical usage factor of 40%).⁶ The impacts will be temporary in nature and will end when construction is complete. Weather-permitting, construction activities will attempt to occur between September 1 – and November 15 each year to avoid noise disturbance to migratory nesting birds. Noise will also increase at the start of each cultivation season as cultivation areas are tilled with a tractor, with a slightly less noise output to that of construction equipment (84 dBA @ 50 ft, usage factor 40%). The activities generating equipment noise shall be limited to daylight hours as specified in CCLUO 2.0 §55.4.12.2.8.

Noise from project operations will come from the general occupation of the Project areas. The only anticipated potential on-going noise sources may be greenhouse fans and vehicular traffic to and from the Project site. Fan noise will be attenuated by installation design, placement/orientation (away from property lines and forested areas), and model selection. The noise from all potential sources will be monitored throughout the year at the identified noise measurement sites on the Site Plan: the western property boundary closest to any greenhouse structure containing a fan and at riparian edges and forested zones to the north of the site. No other sensitive receptors are located within 600 ft of the project site.

Current ambient noise levels range from 30 dBA to 58 dBA (wind speed 2 - 18 mph). All cultivation, nursery, and processing activities shall not increase ambient noise levels by more than 3 decibels as measured at each property line.

⁵ Lighting Zone 0 and Lighting Zone 1, as defined by the International Dark-Sky Association and the Illuminating Engineering Society of North America

⁶ Federal Highway Administration *Construction Noise Handbook*,
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

3.8. WATERSHED & HABITAT PROTECTION

– SWRCB CANNABIS CULTIVATION GENERAL ORDER & POLICY COMPLIANCE SUMMARY

The Applicant has enrolled in SWRCB Order No. 2019-0001-DWQ as a Tier 2 Discharger. A Site Management Plan (SMP) is being developed in accordance with enrollment. Adherence to the SMP will ensure that the watershed and surrounding habitat are protected. All areas of cannabis activities, including cultivation, shall occur on slopes less than 30% and outside of the listed riparian setbacks (relevant 150 ft, 100 ft, and 50 ft) in the Order. Below is a summary of how the proposed activities will meet BPTCs for each relevant category listed in Attachment A (Cannabis Cultivation Policy) of the Order. Where these elements have previously been described in detail herein, the section number is noted for reference.

3.8.1. LAND DEVELOPMENT & MAINTENANCE, EROSION CONTROL & DRAINAGE FEATURES

Site development and maintenance activities will utilize BPTCs in accordance with the SWRCB recommendations. Grading and earthwork activities will be conducted by a licensed contractor in accordance with approved local grading permits and the SMP. Implementation of the SMP will further disconnect any hydrologically connected road reaches and roadside ditches from on-site watercourses to the greatest degree feasible through the installation of rolling dips and additional ditch relief culverts. See § 3.1 for more descriptions.

3.8.2. STREAM-CROSSING INSTALLATION & MAINTENANCE

See § 2.2.1.1 for a detailed description of activities and associated BPTCs.

3.8.3. SOIL DISPOSAL & SPOILS MANAGEMENT

No soil will be taken off-site. All unused soil and soil piles shall be tarped and baffled when not in use. Any spoils from construction activities shall be distributed according to the BPTCs outlined in the SWRCB Order, Attachment A.

3.8.4. RIPARIAN & WETLAND PROTECTION & MANAGEMENT

The Applicant will observe all necessary and required setbacks from wetland and riparian areas. Noise will be measured at the nearest riparian drip edge throughout the year, as cannabis activities take place year-round. The Project will result in no discharge of agricultural water to any of the water features on or near the Project site. No non-invasive trees or other vegetation shall be removed from riparian and wetland areas. Any invasive plants found within such areas will be removed via manual methods with minimal ground disturbance.

3.8.5. WATER STORAGE & USE

See § 3.2 for a detailed description of water storage, use, and BPTCs for water conservation.

3.8.6. FERTILIZERS, PESTICIDES & PETROLEUM PRODUCTS

All the BPTCs described previously in § 3.3 of this document will be utilized. Petroleum products will be stored separately from fertilizers and pesticides in lawful containers within secondary

containment. All refueling and equipment maintenance of small motors shall be done within secondary containment, and any equipment maintenance involving larger motors (e.g. tractor) will be done off-site or within a covered garage with impermeable floor located elsewhere on the Property (not part of the cannabis operation).

3.8.7. WASTES

See § 3.5, previously, for a detailed description of waste handling BPTCs that will be used.

3.8.8. WINTERIZATION

The Applicant will complete all necessary winterization activities listed in the Order by November 15 of each year. The cultivation area shall also be cover-cropped by this date each year.

3.9. INVASIVE SPECIES CONTROL PLAN SUMMARY (§55.4.12.16)

A site-specific Invasive Species Control Plan (the “Plan” in this section) was prepared for the Project (please see additional documentation). Nine (9) invasive species – all plants – were identified in the Project area. The Plan lists manual removal as the most likely effective management method for most of the 9 species, with some additionally responding to grazing, burning, or tilling. The Applicant shall follow recommendations outlined in the Plan with regard to management, timing of efforts, and removal and disposal.

In addition, the water storage pond has the potential to harbor the invasive American bullfrog (*Lithobates catesbeianus*). A *Bullfrog Monitoring and Management Plan* (created by CDFW) will be utilized to conduct regular annual surveys and undertake eradication methods should the animals be found. Please see the *Invasive Species Control Plan* and the *Bullfrog Monitoring and Management Plan* for additional details.

3.10. ENERGY PLAN (§55.4.12.5)

3.10.1. ELECTRICITY

Energy shall be required for cultivation (fans and lighting, where applicable), nursery activities, drying, processing, and resident employee uses, as applicable. At total of 639,962 kwh is predicted once the Project reaches full capacity and is based on (and limited by) 600-amp service by PG&E. It is estimated that the earliest this service would be available is 2026. Please see the Energy Budget in Table 7 for a breakdown of electricity use by month for each activity requiring electricity.

Energy shall be provided via grid power either from PG&E or Redwood Coast Energy Authority (RCEA), or via a combination of grid power and on-site solar array. Options are listed below.

- PG&E: In 2019 (the most recent year data is available), all of PG&E’s power mix was greenhouse-gas free.⁷ The “Base” and “50% Solar Choice” plans provide 28.5% and 64.3% renewable⁸ energy, respectively, according to PG&E’s 2019 Power Content Label.⁹ If the Applicant opts for either of these plans, then they will purchase carbon offset credits to mitigate the portion of energy not supplied by renewable resources. Credits will be purchased from a reputable source recognized by relevant state regulatory agencies.
- PG&E: The “100% Solar Choice” plan provides 100% renewable energy, according to PG&E’s 2019 Power Content Label. The Applicant would not need to purchase carbon offset credits.
- RCEA: Through the “RePower+” service, RCEA is able to provide up to 100% renewable energy for its customers. This would mean the Applicant would not need to purchase carbon offset credits.
- The Applicant does intend to install a permitted solar array that is tied to the grid. This would help offset the amount of electricity use from PG&E, including the percentage of PG&E power that is not defined as renewable. Utilizing all south-facing solid roof surfaces on proposed buildings for the array/s, electricity production capacity is estimated to be 565,896 kWh (OurEvolution Engineering, Inc.; see *Site Plan* for details). When on-site solar is installed, the Applicant will provide evidence of grid-power offset as relevant to the energy used for cultivation, nursery, and processing activities when such evidence is requested by the Department.

Generator use shall be limited to “emergency” use only, as defined in CCR Title 17, Division 3, Chapter 1, Subchapter 7.5, §93116.2(a)(12), or the “emergency use” definition for stationary engines in Title 17, Division 3, Chapter 1, Subchapter 7.5, § 93115.4(a)(30).

3.10.2. HEATING

Heating will be necessary for nursery activities. This will occur in 4 stand-alone greenhouses, 10,000 sf gutter-connect greenhouses, and both indoor nursery facilities. Heating will be accomplished through the use of commercial propane heaters designed for such uses, and may be either direct ambient air type or through radiant floor heating infrastructure via boiler system. Heating will bring internal greenhouse temperatures to ~50°F during the coldest months, approximately January – April, and ~60°F inside the buildings from November – April.

⁷ https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page

⁸ A significant portion of PG&E’s energy supply comes from large hydroelectric power stations which do not qualify as an eligible renewable resource under California law

⁹ <https://www.energy.ca.gov/filebrowser/download/3245>

The mechanical heating capacity will not exceed 10 BTU/hour per square foot, per County building regulations for Ag-exempt structures. A Title 24 Building Energy Requirement for Plant Growth exemption letter certifying the heating is not for human occupancy will be obtained from a qualified Energy Consultant and supplied to the Department during the building permit application process. Total annual propane usage is estimated at 2,317 gallons.

Table 7. Energy Use per Cannabis Activity by Month, in kilowatt-hour, for CISCO FARMS INC. on APN 105-101-011 et al.

Description of Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL BY ACTIVITY
Mixed-Light Cultivation	-	-	9,801	78,374	80,521	76,954	80,239	80,635	50,366	-	-	-	456,889
Nursery Lighting	11,383	13,258	13,628	12,792	13,218	12,792	13,218	12,437	8,508	7,633	3,528	3,646	126,043
Drying	-	-	-	-	471	1,420	753	1,138	1,138	2,905	2,096	-	9,921
Processing	2,680	2,433	2,680	2,598	2,680	2,598	2,680	2,680	2,598	2,680	2,598	2,680	31,581
Utility, gen. lighting, security, etc.	224	202	224	217	224	217	224	224	217	224	217	224	2,637
Farmworker Housing [†]	1,095	989	1,095	1,060	1,095	1,060	1,095	1,095	1,060	1,095	1,060	1,095	12,892
TOTAL BY MONTH	15,382	16,882	27,428	95,040	98,208	95,040	98,208	98,208	63,886	14,537	9,498	7,644	639,962

[†]<https://www.eia.gov/tools/faqs/faq.php?id=97&t=3#:~:text=How%20much%20electricity%20does%20an,about%20877%20kWh%20per%20month>

3.11. SECURITY PLAN

Access to the cultivation, nursery, processing, and storage facilities will be secured and restricted. The cultivation premises and any associated facilities shall be locked when not staffed. Only employees or contractors of the Applicant and designated county and state officials shall be allowed to enter the garden sites or any other associated cultivation facilities. All employees and contractors of the Applicant shall be at least 21 years of age.

The site is not visible from high-traffic public roads, and no high-density residential, commercial, school, or other uses are located near the Project site. Access to the Property is via a locked gate. Additionally, it is anticipated that the Project site will be entirely enclosed within wind-fencing or wind-rows, and access will be via a locked gate/s. All buildings associated with cannabis cultivation, nursery, processing, and storage will be locked when not staffed or in use.

To ensure against diversion to illegal marketplaces, the Applicant will be a participant in the California Cannabis Track-and-Trace (CCTT) system. The Applicant has also delineated specified areas for materials holding and/or destruction, as may be deemed necessary according to state regulations. The Applicant shall also comply with any forthcoming safety and security regulations that may be specified by the county or state. All appropriate and pertinent records, permits, and licenses shall be on-hand at the Project site, pursuant to County and state regulations.

4. CANNABIS ACTIVITIES

Five (5) main activities are proposed at the Project site: commercial nursery / Community Propagation Center, cultivation, drying, processing and packaging (ancillary and Cannabis Support Facility / commercial), and transport-only self-distribution. All activities are proposed as “new” as defined by CCLUO 2.0. Please see the Site Plan for location and layout. It should be noted that all facilities and cultivation areas are orientated in such a manner as to minimize the effects of wind at the site.

4.1. COMMERCIAL NURSERY / COMMUNITY PROPAGATION CENTER

4.1.1. FACILITY DESCRIPTION

Exact area dimensions for specific nursery activities will vary and depend on the needs and demands of other local cultivators that desire to utilize the Community Propagation Center. The nursery area is proposed under a phase-in approach. Nursery space will be added incrementally each year, totaling 46,320 by 2025. An additional 21,440 sf is proposed in 2026, depending on power availability at the site. The commercial nursery facility / community propagation center is composed of three main spaces.

4.1.1.1. Greenhouses

This component is sixteen (16) stand-alone greenhouses totaling 40,320 sf. Greenhouses will house immature cannabis plants and immature cannabis plants intended for clone production (“mother” plants). Artificial light will be used in the greenhouses at a sufficient level to keep plants in a vegetative state but not intended to produce vegetative growth. Greenhouses may be heated during winter and early spring months.

4.1.1.2. Enclosed Nursery

This is an indoor commercial nursery facility totaling 6,000 sf housed in 2 buildings, each with a footprint of 3,000 sf. Clones, mother plants, and small immature cannabis plants will be housed within this space, particularly during winter months. It is projected that clones will occupy a combined area of at least ~800 sf within the two buildings. Minimal artificial (fluorescent and/or LED) lighting will be used for cloning operations. Mother plants and small pots of immature plants intended for sale or transfer will occupy ~4,600 sf of the of combined space in the two buildings during cooler months, and potentially year-round, depending on weather and operational logistics. Artificial lighting will be used to keep plants alive and in a vegetative state. Additional space within the building is designated for storage.

4.1.1.3. Gutter-connect greenhouses

In 2026 and beyond, additional gutter-connect greenhouse space totaling 21,440 sf will be used to house additional mother plants and small pots of immature plants once Project facilities reach maximum operational capacity. The floor of the greenhouses will be gravel with inlaid radiant heating where applicable.

4.1.2. OPERATIONS

This is proposed as a Cannabis Support Facility and will be operated as a commercial nursery with two main purposes: 1) produce clones and immature plants for wholesale and/or transfer to other cultivators and distributors, and 2) serve as a Community Propagation Center that houses immature plants and clones from/for other local cultivators.

4.1.2.1. Mother plants

Initially, immature “mother” plants will be started from seeds or clones obtained from a licensed nursery. Thereafter, cuttings (clones) will be taken from the current stock of mother plants in order to create the next batch of mother plants. Mother plants are only grown for a short time; once all possible clones (for future mothers and on-site cultivation plants) from a plant are obtained, the plant is destroyed and composted. Thus, mother plants are created continuously throughout the year. Mother plants are not allowed to flower, which will require supplemental lighting in certain periods of the year when daylight hours approach 12 or less hours. For the Community Propagation Center, genetic material and/or plants that result in mother plants may also be brought to the facility by cultivators who also hold a state-issued self-distribution license.

These particular mothers may be kept in a vegetative state for different periods of time, depending on the specific needs of cultivators holding genetic stock at the facility. Mother plants are not allowed to flower, which will require supplemental lighting in certain periods of the year when daylight hours approach 12 or less hours. All activities shall be recorded in the CCTT system.

4.1.2.1. Clones and immature plants for sale

Clones will be taken from the mother plants year-round, with January – mid-July being the most intensive months (facility at full capacity). From mid-July – December, cloning operations will be approximately 1/3 of operations in the first half of the year. Clones will be reared under artificial lighting in the indoor commercial nursery building. Clones will be situated on cloning racks that occupy approximately 800 sf of floor space. The Applicant will sell clones when they are 2-4 weeks old at the rooted stage, but still in “cube” medium (biodegradable non-soil medium).

Some cultivator customers may desire potted immature plants. For such orders, clones will be up-potted to 5-inch and 1-gallon pots after 2-4 weeks using imported soil. The potted plants will be grown in the stand-alone and gutter-connect greenhouse spaces designated for the commercial nursery. Plants remain in 5-inch pots for approximately 4 weeks and then are up-potted into 1-gallon pots. Plants may remain in 1-gallon pots for up to 4 weeks prior to sale or transfer. All activities shall be recorded in the CCTT system.

4.1.2.2. Community Propagation Center

A portion of the commercial nursery facility will house cultivator-specific genetic stock (mother plants) and also serve to rear associated clones and immature plants associated with that stock. Clones and immature plants will then be transported back to the cultivators’ licensed premises (off-site farms) for cultivation, following state guidelines. All activities shall be recorded in the CCTT system.

4.2. CULTIVATION / CULTIVATION PLAN

4.2.1. FACILITY DESCRIPTION

A total of 217,800 sf cultivation will occur on-site. All cultivation is classified *new open-air cultivation*, as defined by CCLUO 2.0. Cultivation of mature plants will occur in amended native soil in tilled beds for full-sun plants. For any and all greenhouse operations, plants may be planted either in tilled beds using amended native soil or in pots using amended native soil or completely imported soil, or a mixture of both. Three main methods of cultivation will be employed.

4.2.1.1. Full-sun outdoor – outdoor garden area

This plot shall be 130,680 sf (3 acres) of canopy in a total disturbed cultivation area that is ~10 acres. The layout assumes a 6-ft diameter plant and is proposed as forty-five (45) 600-ft rows

and one (1) or two (2) comprising 731 ft. Plants are positioned at 6-foot centers between plants within the same row, and 16-ft centers between plants in different rows, thus allowing for 10-ft aiseways between rows where no canopy will occur. This will allow tractor access between rows and facilitate County compliance inspections. However, at the beginning of any given year, the Applicant may propose to reconfigure the outdoor cultivation area (e.g. no or reduced aiseways) and will seek County approval to do so prior to cultivation by submitting a revised Site Plan and any other required documentation and/or forms.

4.2.1.2. Light-deprivation – greenhouses

This area is a total of 43,560 sf (1 acre) in seventeen (17) greenhouses that measure 105’ X 24’ (2,520 sf) and one (1) that is 30’ X 24’ (720 sf). Cannabis will be grown using light-deprivation techniques *without* the use of any artificial light in the canopy area, producing 2-3 cycles per year (weather-dependent). Black-out plastic sheeting will be used to exclude natural light, when appropriate.

4.2.1.3. Mixed-light – gutter-connect greenhouses

This is a total of 43,560 sf grown in gutter-connect greenhouses with the use of supplemental artificial lighting in the canopy area at an intensity consistent with the CDFA Mixed-light Tier 2 classification (≤ 25 watts/sf). Three harvests per year are expected. The floor of the greenhouses will be gravel with inlaid radiant heating where applicable. These greenhouses shall also be gutter connected to the greenhouses containing additional commercial nursery space. Exact dimensions of greenhouses have yet to be determined, but total structural footprint (including nursery greenhouses) is 325’ X 200’.

4.2.2. OPERATIONS

Up to three (3) rounds of cultivation will occur each year in the light-dep greenhouses and mixed-light gutter-connect greenhouses. One (1) round of cultivation will occur in the full-sun area, unless auto-flower plants are used, which may produce two (2) rounds. All activities will be entered in the CCTT systems as required. Please see the *Schedule of Activities* section below for more details regarding timing.

4.2.2.1. Propagation

All plants will be started in clone or seedling (juvenile) form from the on-site nursery. Propagation activities will occur continuously from January – August as cultivation areas are planted in succession.

4.2.2.2. Planting

In general, planting will be offset by 0.5 acres per week, facility-wide. Plants will be transferred from the nursery spaces directly to the canopy (cultivation) areas. Up to one (1) gallon of water per plant may be used at time of transplant.

4.2.2.3. Cultivation / vegetative growth & flowering

During this stage, plants are monitored for health and progress. Plant-management activities include pruning and de-leaving, with all excess plant material placed in designated compost areas. Other main activities include irrigation and administration of fertilizers, pesticides, and compounds or teas to maintain plant health and vigor. Integrated pest management strategies – including application of biological controls – are employed to minimize pest infestation. Any necessary weeding is done by hand or using a tractor implement, if space configurations permit.

4.2.2.4. Harvest

Plants will be harvested in up to 3 cycles in the mixed-light greenhouses and light-dep greenhouses and 1-2 cycles for the outdoor full-sun plot. Harvest will occur at the rate of approximately 0.5 acres per week for all areas, so that drying and processing activities may be offset. In general, upon maturation, plant material will be harvested into manageable pieces and weighed, in compliance with CCTT requirements. Plant material is placed in totes and then taken to drying buildings. Some fresh plant material may also move immediately off-site to distribution or manufacturing at this time. Post-harvest, root-balls may be extracted from cultivation areas and placed in the compost areas and/or tilled in with a tractor where feasible.

4.3. DRYING

4.3.1. FACILITY DESCRIPTION

Four (4) buildings, each with a footprint of 4,800 sf (19,200 sf total) will serve as a drying facility for all cannabis grown on-site and from the Applicant’s other cultivation operations on nearby parcels.

4.3.2. OPERATIONS

If cannabis is to be dried, it will be taken to one of the drying buildings and hung to dry for several days. The building may be equipped with fans and air conditioning and/or heating units (specifically for non-human use) and/or dehumidification units for proper curing and elimination of conditions that promote mold. The interior of the drying buildings shall remain unfinished, per Building Department “Ag-exempt” permit regulations. (A Title 24 Building Energy Requirement for Plant Processing exemption letter certifying the environmental controls are not for human occupancy will be obtained from a qualified Energy Consultant.) Depending on conditions, it may take from 5-10 days for cannabis to properly dry and cure. All work surfaces and equipment used for drying shall be maintained in a clean and sanitary condition. The building will be locked when immediate access is not required.

4.4. PROCESSING/ PROCESSING PLAN

4.4.1. FACILITY & LOCATION

This is proposed as a Cannabis Support Facility (as defined by CCLUO 2.0) for processing of off-site cannabis, as well as cannabis produced on-site. An ADA-accessible commercial building with an approximate footprint of 3,000 sf will be constructed for processing and packaging activities.

Processing, trimming, weighing, and packaging will occupy ~2,100 sf. Please see the Site Plan for building location and the associated draft building floorplan.

The building will also house an employee breakroom, kitchen, ADA-compliant restroom with shower, additional restroom, a small office, and appurtenant storage areas for supplies and refuse/recycling. The building will have associated permitted electricity supplied by grid power, a permitted OWTS, and ample parking, including an ADA space.

4.4.2. OPERATIONS

All necessary processing and packaging activities will occur on-site by employees or contractors of the Applicant. Trimming and packaging activities will occur for cannabis produced off-site, on-site, and may also occur for cannabis produced from the Applicant’s associated other nearby cultivation sites. As a Cannabis Support Facility, processing will also occur for other farms’ products, according to their specifications. If product is to be bucked and trimmed, these activities will occur in the designated space in the commercial processing building. Trimming will be done by hand and/or using automated trimming machines. After trimming, employees shall perform all additional processing and packaging activities in the designated space in the processing building. Additional processing includes creation of non-manufactured cannabis products, such as cannabis cigarettes. All work surfaces and equipment used for processing and packaging shall be maintained in a clean and sanitary condition, and PPE (e.g. dust masks, gloves) shall be provided for employee use.

4.5. TRANSPORT-ONLY SELF DISTRIBUTION

The Applicant intends to obtain licensure from the state for Transport-Only Self Distribution. This will allow the following activities necessary for farm and business operations:

- transport of clones and immature plants from the commercial nursery to each on-site cultivation license within canopy areas
- transport of clones and immature plants from the commercial wholesale nursery to other farms
- transport of harvested cannabis from each cultivation license canopy area to on-site consolidated drying facility (4 drying buildings) and processing facility (1 building)
- transport of fresh, bucked, or trimmed cannabis, bulk plant material (“trim”), and non-manufactured cannabis products to other distributors and/or manufacturers

Only products produced by the Applicant on-site will be transported under the self distribution license. The Applicant will not charge a fee for transport of such products. As activities are of a transport-only nature, no physical structure is required for self-distribution activities, other than an area designated for records storage, which shall be the proposed office within the processing building.

5. SCHEDULE OF ACTIVITIES

5.1. TIMELINE

As the proposed Project contains many elements, a phase-in approach is anticipated for implementation. The initial year (Year 1) of permit approval is expected to be 2022. From this time, the Applicant anticipates a 5-year implementation period until all Project activities are at full-capacity. The implementation schedule is also dependent on when sufficient grid-power becomes available at the site (and in the Petrolia area, in general). The current PG&E wait time for necessary power for full capacity is 4-6 years.

YEAR 1

10,000 sf of cultivation in greenhouses (GH-1) using light-dep methodology

43,560 sf (1 acre) of full-sun outdoor cultivation

2 nursery greenhouses (5,040 sf; CN-2)

Water storage: pond, plastic tanks, fire tank/s

Drying & processing: off-site at Applicant's other related facilities

Year 2

Add 10,000 sf light-dep cultivation (20,000 sf total; GH-1)

Add 1 acre full-sun outdoor cultivation (2 ac total)

Add 2 nursery greenhouses (4 total, 10,080 sf; CN-2)

Add 1 nursery building (3,000 sf; CN-3)

Add 1 drying building (4,800 sf)

Year 3

Add 10,000 sf light-dep cultivation (30,000 sf total; GH-1)

Add 1 acre full-sun outdoor cultivation (3 ac total)

Add 4 nursery greenhouses (20,160 sf total; CN-2)

Add 1 drying building (2 total)

Add processing building (3,000 sf)

Year 4

Add 13,560 sf light-dep cultivation (43,560 sf total; GH-1)

Add 2 nursery greenhouses (25,200 sf total; CN-2)

Add 1 drying buildings (3 total)

Add 2 employee housing units

Year 5

Add gutter-connect greenhouses: 43,560 sf mixed-light cultivation (ML-1)

Add gutter-connect greenhouses: 21,440 sf nursery (CN-1)

Add 6 nursery greenhouses (40,320 sf total; CN-2)

Add 1 nursery building (2 total; CN-3)

Add 2 employee housing units (4 total)

5.2. CALENDAR OF ACTIVITIES

Table 8. Calendar of All Cannabis Activities for CISCO FARMS INC. on APN 105-101-011 et al.

Component	Description of Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Commercial Nursery (CN)	Maintenance of mother plants												
	Cutting, propagation, sale of clones & juvenile plants												
Mixed-light Cultivation (ML)	Cloning & nursery activities												
	Plant, veg & flowering in canopy area												
	Harvest												
Light-dep Greenhouse Cultivation (GH)	Cloning & nursery activities												
	Plant, veg & flowering in canopy area												
	Harvest												
Full-sun Outdoor Cultivation (OD)	Cloning & nursery activities												
	Plant, veg & flowering in canopy area												
	Harvest												
Processing (P)	Drying												
	Trimming & packaging												
Transport-Only Self Distribution (D)	Transport clones & juvenile plants to on-site canopy areas & customers												
	Transport cannabis products to processing & distributors												
Site Maintenance (S)	Irrigation & water system monitoring												
	Invasive species monitoring & mgmt												
	Winterization												
	Drainage features maintenance & monitoring												

5.3. DETAILED SCHEDULE OF ACTIVITIES

JANUARY

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: clone cutting
ML: juvenile plant veg & maintenance
GH: clone cutting
GH: juvenile plant veg & maintenance
P: trim FS; trim other farms' cannabis
D: transport clones to customers
D: transport on-site cannabis material to other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance

FEBRUARY

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: clone cutting
ML: juvenile plant veg & maintenance
GH: juvenile plant veg & maintenance
OD: clone cutting, propagation
P: trim other farms' cannabis
D: transport clones & juvenile plants to customers
D: transport on-site cannabis material to other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance
S: invasive plant monitoring & maintenance

MARCH

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: juvenile plant veg & maintenance
GH: clone cutting
GH: juvenile plant veg & maintenance
OD: juvenile plant veg & maintenance
P: trim other farms' cannabis
D: transport clones & juvenile plants to customers
D: transport on-site cannabis material to other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance

APRIL

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: clone cutting
ML: juvenile plant veg & maintenance
ML: plant 1st round
ML: veg, flowering & maintenance
GH: juvenile plant veg & maintenance
GH: plant 1st round
GH: veg, flowering & maintenance
OD: juvenile plant veg & maintenance
P: trim other farms' cannabis
D: transport clones & juvenile plants to customers
D: transport juvenile plants to canopy areas
D: transport on-site cannabis material to other distributors/manufacturers
S: water system monitoring & maintenance

MAY

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: juvenile plant veg & maintenance
ML: harvest 1st round
ML: plant 2nd round
ML: veg, flowering & maintenance
GH: clone cutting
GH: juvenile plant veg & maintenance
GH: veg, flowering & maintenance
OD: juvenile plant veg & maintenance
OD: plant out
OD: veg & maintenance
P: dry ML 1st round; trim other farms' cannabis
D: transport clones & juvenile plants to customers
D: transport juvenile plants to canopy areas
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system monitoring & maintenance
S: Bullfrog detection/monitoring surveys

JUNE

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: juvenile plant veg & maintenance
ML: veg, flowering & maintenance
GH: juvenile plant veg & maintenance
GH: harvest 1st round
GH: plant 2nd round
GH: veg, flowering & maintenance
OD: veg & maintenance
P: dry & trim ML 1st round & GH 1st round
D: transport clones & juvenile plants to customers
D: transport juvenile plants to canopy areas
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system monitoring & maintenance
S: Bullfrog detection/monitoring surveys

JULY

CN: mother plant veg & maintenance
CN: Clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: juvenile plant veg & maintenance
ML: harvest 2nd round
ML: plant 3rd round
ML: veg, flowering & maintenance
GH: juvenile plant veg & maintenance
GH: flowering & maintenance
OD: veg & maintenance
P: trim GH 1st round; dry & trim ML 2nd round
D: transport clones & juvenile plants to customers
D: transport juvenile plants to canopy areas
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system monitoring & maintenance

AUGUST

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: veg, flowering & maintenance
GH: harvest 2nd round
GH: plant 3rd round
GH: veg, flowering & maintenance
OD: veg, flowering & maintenance
P: trim ML 2nd round; dry & trim GH 2nd round
D: transport clones & juvenile plants to customers
D: transport juvenile plants to canopy areas
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system monitoring & maintenance

SEPTEMBER

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
ML: flowering & maintenance
ML: harvest 3rd round
ML: flowering & maintenance
GH: flowering & maintenance
GH: harvest 3rd round
OD: flowering & maintenance
P: trim GH 2nd round; dry ML 3rd round & GH 3rd round
D: transport clones & juvenile plants to customers
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system monitoring & maintenance

OCTOBER

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
OD: harvest
P: trim ML 3rd round & GH 3rd round; dry OD
D: transport clones to customers
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance
S: Bullfrog eradication/pond draining (if necessary)
S: winterization – cover crop, stow cultivation supplies, cover soil piles, apply native seed mix to bare areas, mulch

NOVEMBER

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
OD: harvest
P: dry & trim OD; trim other farms' cannabis
D: transport clones to customers
D: transport on-site cannabis material to drying/processing & other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance
S: winterization – cover crop, stow cultivation supplies, cover soil piles, apply native seed mix to bare areas, mulch

DECEMBER

CN: mother plant veg & maintenance
CN: clone cutting, propagation
CN: juvenile plant veg & maintenance
P: trim OD; trim other farms' cannabis
D: transport clones to customers
D: transport on-site cannabis material to other distributors/manufacturers
S: water system & drainage feature monitoring & maintenance

5.4. HOURS OF OPERATION

Activities will take place at the Project site between 7:00 AM – 8:00 PM, 7 days per week, year-round.

6. EMPLOYEES

A total of 34 employees will be hired and/or contracted for the project. Twelve (12) employees will be employed full-time year-round: 4 managers and 8 laborers/farmworkers. It is anticipated that an additional 22 persons will be hired during peak times (e.g. weeks when harvesting, planting, and processing are concurrent). Table 9, below, provides a general breakdown of employees by cannabis activity and employee classification, although it is expected that fluidity will exist between which laborers are assigned to which activity and at what time during the year. Seasonal and/or contracted labor will be hired during peak times, which occur at regular intervals between May – December, depending on the season’s planting and harvesting schedule. Non-peak times are January – April, when only managers and year-round laborers will be employed. Up to 8 employees may live on-site as the Project is currently proposed; additional employees will live off-site and commute daily to the Project site.

Table 9. Employees by Activity and Classification for CISCO FARMS INC. on APN 105-101-011 et al.

ACTIVITY	MANAGERS	YEAR-ROUND LABORERS	SEASONAL / CONTRACT LABOR
Nursery (all)	1	2	4
Cultivation	1	6	10
Processing	1	-	8
Maintenance	1	-	0
<i>Classification Subtotal</i>	4	8	22
TOTAL EMPLOYEES		34	

6.1. EMPLOYEE SAFETY PRACTICES

Cultivation, harvesting, and processing will be performed by employees specifically trained in each activity, including techniques and use of pruning tools, and proper application and storage of pesticides and fertilizers. Applicable PPE shall be employed when handling agricultural chemicals, during routine garden activities, processing, and manufacturing. Any and all employees will be provided PPE free of charge. All PPE will be stored on designated shelves and/or bins within the employee break room or in adjacent storage areas. As required by law, these locations are separate from the locked agricultural chemicals storage areas.

The Applicant shall utilize proper safety procedures including fire safety, use of rubber (or similar material) gloves and respirators (if applicable), proper hand washing guidelines, and emergency protocols. Contact information for the local fire department, CalFIRE, Humboldt County Sheriff, and Poison Control will be posted within the employee break room in plain view and/or at the employee restrooms, and at each area where agricultural chemicals are stored. A written copy of emergency procedures and contact information will be kept on site and also provided to each employee. The material safety data sheets (MSDS) for all chemicals and compounds will be kept on site, updated monthly (if necessary), and accessible to employees. All work performed will follow Cal-OSHA standard practices.

The Applicant and its employees and contractors shall comply with CDC, Cal-OSHA, and Humboldt County DPH COVID-19 and/or other emergency outbreak safety procedures that are current at the time of operation. On-site personnel shall be limited to the minimum required number for task completion each working day.

6.2. EMPLOYEE SANITATION & HYDRATION

Restroom and hand washing facilities will be available for employee use. It is estimated that an extra 50 gallons per day maximum will be generated from these uses during the peak times. The septic system will be designed to accommodate this amount. Drinking water shall be sourced from the on-site well and available from the sink in the employee break room, restroom, and external taps/spigots.

To limit the possibility of spread of COVID-19 and other infectious diseases, and to comply with basic sanitation procedures, employees shall be required to wash their hands after using the restroom, and prior to and after consuming food. Employees involved in processing operations will also be required to wash their hands after arriving to the site and coughing or sneezing. In addition to the washing facilities, hand sanitizer will be available in the processing room, break room, drying room/s, kitchen, and restroom facilities.

6.3. ON-SITE HOUSING

6.3.1. FACILITY DESCRIPTION

Four (4) modular housing units will be located on-site for housing up to 8 employees / farmworkers-in-residence. Housing is proposed as pre-fabricated modular units, or similar structures. Exact number, dimensions, and specifics of the housing units have yet to be determined, but will be based on units that are made for the agricultural industry. All housing shall comply with Federal H-2A Housing Regulations (20 CFR § 654.404 – 654.417), any and all state requirements, such as CCR Title 25, Div.1, Chpt.1, Subchpt.3, building standards published

in the State Building Standards Code relating to labor camps, DOL OSHA standards regarding environmental controls set forth in 29 CFR 1910.142, and other applicable regulations.

The location of the housing units on the Site Plan is approximate, and floorplans included as part of this application are for example purposes only. Final building plans will be submitted to the Building Department for approval upon receipt of cannabis permits. The Applicant will also comply with any County requirements and will obtain all necessary local and state permits to operate said housing (HSC §17030).

Drinking and domestic water for the units shall be supplied by the proposed on-site well and all units will be serviced by an OWTS. Electricity will be provided by grid power and/or a small solar array.

6.3.2. OPERATIONS

The Applicant will perform routine maintenance, maintain dwellings to code, renew permits annually, inspect, keep records and submit reports, agree to annual CA Department of Housing & Community Development (HCD) inspections, and comply with all portions of CCR HSC §1700-170062.5, better known as the Employee Housing Act.

Appendix 2 Cover Sheet

<u>Document Title</u>	<u>PDF Page No.</u>
Botanical Report of Special Status Native Plant Populations and Natural Communities (Naiad Biological Consulting, September 2021)	2-16
Biological Reconnaissance and Project Feasibility Assessment Report (Naiad Biological Consulting, September 2021)	17-142
Invasive Species Control Plan (Naiad Biological Consulting, October 2020)	143-165
Golden Eagle Survey Report (Erin Phillips, Naiad Biological Consulting, February 2022)	166-178
Road Evaluation (OurEvolution Engineering, March 2021)	179-185
Cultural Resources Investigation Report for Commercial Cannabis Cultivation at APN 104-232-005 and APN 105-101-011 in Petrolia, Humboldt County, California (William Rich and Associates, May 2021)	<i>On File with Humboldt County Planning and Building</i>
Septic Feasibility Study (Our Evolution Engineering, August 2021)	186-192
Onsite Wastewater Treatment System Design (OurEvolution Engineering, October 2021)	193-198
Web Soil Survey Soil Type Map (Natural Resources Conservation Service, Web Soil Survey, February 2022)	199-202
Letter to Humboldt County: “Agricultural activities and relation to Williamson Act” (Cenci Consulting, December 2021)	203-204
CalEEMod Analysis for Cisco Farms, Inc. Cannabis Project (NorthPoint Consulting, April 2022)	205-234
Notice of Applicability for Waste Discharge Requirements, Water Quality Order WQ 2019-0001-DWQ for WDID 1_12CC428193 (State Water Resources Control Board, May 2022)	235-242
Executed Streambed Alteration Agreement No. EPIMS-HUM-18009-R1C (California Department of Fish and Wildlife, June 2022)	243-259

BOTANICAL REPORT OF SPECIAL STATUS NATIVE PLANT POPULATIONS AND NATURAL COMMUNITIES

APN: 105-101-011 & 104-232-005

**1414 Chambers Road
Petrolia, CA 95558**

Prepared For:

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Prepared by:

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Date Prepared:

September 21st, 2021

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Summary Information

Legal description:	Portion of section 2 of T2S, R2W, H.B.&M.
APN:	105-101-011 & 104-232-005
USGS 7.5' Quad:	Petrolia (4012433)
Parcel size:	436 Acres
Dates of survey:	March 21 st and June 21 st , 2021
Surveyed by:	Georgia Hamer and Sarah Mason
Field survey effort:	7 hours
Results:	<u>No CRPR 1 or 2 plants were observed</u>

Introduction, Background, and Project Understanding

Purpose and Need

This botanical survey report was prepared to assess potential impacts to botanical resources and summarizes the results of a survey conducted in Humboldt County near Petrolia, California (APN: 105-101-011 and 104-232-005). The survey was performed to identify special status plants and sensitive plant communities that could be impacted by operations associated with the cultivation of cannabis within the parcels in accordance with the California Environmental Quality Act (CEQA) using the California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Project Description and Setting

The proposed project is for approximately 5 acres of cannabis cultivation, 3 acres of full sun outdoor and 2 acres of greenhouses, within two parcels totaling to 436 acres. The land was historically utilized for grazing and is dominated by several invasive grass species.

The parcel address is located at 1414 Chambers Road, Petrolia, CA, 95558-0029. The parcels are approximately 1.8 miles east of downtown Petrolia, California within the Petrolia USGS 7.5-minute quadrangle (Quad code: 4012433), section 2, T2S, R2W, H.B.&M. The center location of the project area is 40°19'34.91" N 124°15'51.51"W at an elevation of 289 feet (88 meters) above sea level (Google Earth Pro, 2021).

Soil, Topography, and Hydrology

Data from *Web Soil Survey* for the project area do not indicate any unique soil types that would provide habitat for rare plants such as serpentinite or peat.

The project area is situated within the lower foothills of the North Coast Ranges approximately 1.0 mile north of the Mattole River. The project area lies within the Mill Creek watershed which drains into the Pacific Ocean via the Mattole River. Refer to Figure 1 (Appendix C) for locator map.

The project area is on a very slight west facing aspect ranging from ~260 to ~315 feet in elevation.

Definitions

Special Status Plants and Plant Communities

Special status plants include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) in addition to plants which meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). CDFW recommends that plants on California Rare Plant Ranks (CRPR) Lists 1A (presumed extinct or extirpated), 1B (rare, threatened, or endangered in California and elsewhere), 2A (presumed extirpated) and 2B (rare, threatened, or endangered in California but more common elsewhere), or other species that warrant consideration based on local or biological significance, be addressed during California Environmental Quality Act (CEQA) review of proposed projects. Plants of rank 3 and 4, which are under review and watch lists respectively, are addressed by Naiad Biological Consulting, and may warrant consideration under CEQA if potential or cumulative impacts to the plant exist.

CDFW's natural community rarity rankings follow NatureServe's 2012 *NatureServe Conservation Status Assessment: Methodology for Assigning Ranks*, in which all alliances are listed with a global (G) and (S) rank. NCSC are those natural communities that are ranked S1 to S3 (CDFW, 2020), where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

Methods

Pre-Site Visit Data Compilation and Preparation

Prior to conducting the field surveys, the following database information was reviewed to determine the location and types of botanical resources that possibly exist in the survey area. This pre-field investigation included searches of the California Natural Diversity Database (CNDDDB, 2021) and the California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPS, 2021). This list includes CRPR (California Rare Plant Rank) 1 and 2 plants that have been observed within a 9-quad search centered on the *Petrolia* quadrangle. Because this quadrangle is coastal, only 7 quadrangles lie within the 9-quad search. USGS quadrangles within the search area include: Buckeye Mtn. (4012432), Cape Mendocino (4012444), Capetown (4012443), Cooskie Creek (4012423), *Petrolia* (4012433), Shubrick Peak (4012422), and Taylor Peak (4012442). The results of the project scoping are presented below in Table 1 (Appendix A).

Botanical Field Survey and Habitat Investigation

The early season, March 21st, botanical field survey for this project was completed by Georgia Hamer. Georgia holds a BS in Biology with a concentration in Ecology from Humboldt State University (HSU). Georgia has worked professionally as a Botanist for the Native Land Trust of New England, the Lakeview, OR district Bureau of Land Management (BLM), and for the last 3 years at Pacific Watershed Associates in Humboldt County. Georgia specializes in botanical inventories, environmental restoration plans, and rare plant identification and protection.

The late season, June 21st, botanical field survey for this project was completed by Sarah Mason. Sarah holds a BS in Botany from Humboldt State University. Sarah has worked as an assistant botanist and biologist with Caltrans, as a Botanical Technician for the Klamath and Bitterroot National Forests, and is currently working towards receiving her MSc in Biology with a concentration in bumblebee ecology. Sarah has experience in rare plant identification, invasive species removal, protection and monitoring of rare plants, and teaching plant taxonomy at the university level.

Surveys were floristic in nature and conducted in a manner consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Plants were identified to the lowest taxonomic level necessary to ensure that they were not a species of concern. Plants not identifiable in the field were identified off site with the use of *The Jepson Manual, Vascular Plants of California*. Other resources used to identify plants can be found in the reference section towards the end of this report.

Botanical surveys were conducted throughout the areas proposed for cultivation operations and the associated road system. Surveys were conducted in an intuitive meander focused on areas likely to provide habitat for rare plant species and/or potentially affected (directly or indirectly) by cultivation operations. These areas include but are not limited to: existing permanent and seasonal roads, new road construction, road points and crossings, forest openings (i.e., meadows, landings, and cut banks), springs and watercourses. Refer to Figure 2 (Appendix C) for the survey routes.

Results

Habitats Observed

No special-status vegetation communities or habitats were observed during the botanical survey of the project area. The project area habitat is typical of valley and foothill grasslands and coastal prairie within the lower foothills of the Northern Coast Ranges. The surrounding areas are typical of North Coast coniferous forest and mixed evergreen forest, dominated by Douglas-fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*). There is a small stretch of riparian woodland, where a portion of Mill creek runs through, just south of the project area and along the road leading to the pasture. There is no canopy or shrub layer within the project area. Some native grasses are present, including *Festuca idahoensis*, but no sensitive natural communities could be established during surveys due to the large amount of invasive grasses present, consistent with historic grazing. No watercourses exist within the project area. See figures 3, 4, and 5 (Appendix D) for example photos of project area and habitats present.

Species Observed

No CRPR 1 or 2 plants were encountered in the project area. *Hesperocyparis macrocarpa* (Monterey cypress), a CRPR of 1B.2 in its natural range, was observed during surveys but is believed to be a planted ornamental and should not be impacted by cultivation operations. See figure 4 (Appendix D) for photo of planted Monterey cypress.

Refer to Table 2 (Appendix B) for a list of species observed in the project area. A total of 82 plant taxa were observed in the project area, of which approximately 48% are non-native and 27% are invasive. Several invasive grass species, such as slender wild oat (*Avena barbata*), Italian rye grass (*Festuca perennis*), and soft chess (*Bromus hordeaceus*), dominate the project area.

Conclusion and Discussion

Conclusion

Results of the botanical field survey indicate that negative impacts to sensitive species or sensitive habitats will not occur as a result of the development of cannabis cultivation at the particular site investigated and surveyed.

Although no listed species were observed during the field survey, it is possible that previous ground disturbances, existing drought conditions, which may alter bloom times and durations, as well as herbivory by deer could have affected the survey results.

Recommendations

Due to the low quality of habitat, from historic grazing and high numbers of invasive grasses present, no sensitive plant species, communities, or habitats were encountered during the botanical field survey. It is not expected that cultivation operations will impact habitats further. No further botanical surveys are recommended.

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Appendix A. Results from database search

Table 1. Target special-status plants of the project area

Petrolia and surrounding 7.5 min quadrangles							
Scientific Name	Common Name	CRPR	Bloom Period	Lifeform	Habitat	Micro Habitat	Elevation (m)
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	1B.2	Mar-Jun	annual herb	Coastal Strand, Northern Coastal Scrub	dunes, coastal	0 - 215 meters
<i>Layia carnosa</i>	beach layia	1B.1	Mar-Jul	annual herb	Coastal Strand, Northern Coastal Scrub (sandy)	dunes, coastal	0 - 60 meters
<i>Packera bolanderi</i> var. <i>bolanderi</i>	seacoast ragwort	2B.2	May-Jul	perennial rhizomatous herb	Coastal scrub; North Coast coniferous forest	Sometimes roadsides.	30 - 650 meters
<i>Erysimum concinnum</i>	bluff wallflower	1B.2	Feb-Jul	annual / perennial herb	Coastal bluff scrub, coastal dunes, coastal prairie	dunes, coastal	0 - 185 meters
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	1B.2	(Apr)Jun-Oct	perennial herb	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	dunes, coastal	0 - 30 meters
<i>Romanzoffia tracyi</i>	Tracy's romanzoffia	2B.3	Mar-May	perennial herb	Coastal bluff scrub. Coastal scrub	rocky	15 -30 meters
<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	1B.1	Jun	perennial rhizomatous herb	Cismontane woodland (openings), Valley and foothill grassland	Known in CA from only one occurrence near Cape Ridge.	NA
<i>Erythronium oregonum</i>	giant fawn lily	2B.2	Mar-Jun	perennial bulbiferous herb	Cismontane woodland	sometimes serpentinite, rocky, openings; Meadows and seeps	100 - 1150 meters
<i>Erythronium revolutum</i>	coast fawn lily	2B.2	Mar-Jul	perennial bulbiferous herb	Broadleafed upland forest; North Coast coniferous forest	Mesic, streambanks; Bogs and fens	0 - 1600 meters
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	1B.2	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest	often roadcuts.	15 - 880 meters

<i>Montia howellii</i>	Howell's montia	2B.2	Mar-May	annual herb	North Coast coniferous forest	Vernally mesic, sometimes roadsides; Meadows and seeps; Vernal pools	0 - 835 meters
<i>Oenothera wolfii</i>	Wolf's evening-primrose	1B.1	May-Oct	perennial herb	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	sandy, usually mesic.	3 - 800 meters
<i>Piperia candida</i>	white-flowered rein orchid	1B.2	May-Sep	perennial herb	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentinite	30 - 1310 meters
<i>Castilleja litoralis</i>	Oregon coast paintbrush	2B.2	Jun-Jul	perennial herb (hemiparasitic)	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	15 - 100 meters
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	1B.2	Apr-Aug	annual herb	Coastal bluff scrub; Chaparral (openings); Coastal prairie; Valley and foothill grassland	NA	5 - 1665 meters
<i>Gilia millefoliata</i>	dark-eyed gilia	1B.2	Apr - Jul	annual herb	Coastal Dunes	Sandy	0 - 30 meters
<i>Polemonium carneum</i>	Oregon polemonium	2B.2	Apr-Sep	perennial herb	Coastal prairie, Coastal scrub, Lower montane coniferous forest	NA	0 - 1830 meters

Appendix B. Plant Species Observed

Table 2. List of plant species encountered during surveys

Genus	Common Name	Origin
Trees		
<i>Abies grandis</i>	grand fir	Native
<i>Alnus rubra</i>	red alder	Native
<i>Arbutus menziesii</i>	Pacific madrone	Native
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	Native (planted)
<i>Notholithocarpus densiflorus</i>	tan aok	Native
<i>Picea sitchensis</i>	sitka spruce	Native
<i>Pseudotsuga menziesii</i>	Douglas-fir	Native
<i>Sequoia sempervirens</i>	coast redwood	Native
<i>Tsuga heterophylla</i>	Western hemlock	Native
<i>Umbellularia californica</i>	bay laurel	Native
Shrubs		
<i>Baccharis pilularis</i>	coyote brush	Native
<i>Ceanothus thrysiflorus</i>	blueblossom	Native
<i>Frangula californica</i>	coffee berry	Native
<i>Genista monspessulana</i>	French broom	Cal-IPC High
<i>Lonicera hispidula</i>	pink honeysuckle	Native
<i>Oemleria cerasiformis</i>	oso berry	Native
<i>Ribes bracteosum</i>	stink currant	Native
<i>Rosa pisocarpa</i>	cluster rose	Native
<i>Rubus parviflorus</i>	thimble berry	Native
<i>Rubus ursinus</i>	California blackberry	Native
<i>Sambucus racemosa</i>	red elderberry	Native
<i>Toxicodendron diversilobum</i>	poison oak	Native
Grass & Graminoids		
<i>Agrostis stolonifera</i>	creeping bentgrass	Cal-IPC Limited
<i>Avena barbata</i>	slender oat	Cal-IPC Moderate
<i>Cynosurus echinatus</i>	dogtail grass	Cal-IPC Moderate
<i>Festuca idahoensis</i>	Idaho fescue	Native
<i>Holcus lanatus</i>	velvet grass	Cal-IPC Moderate
<i>Poa annua</i>	annual bluegrass	Non-native
<i>Briza maxima</i>	rattlesnake grass	Cal-IPC Limited
<i>Aira caryophylla</i>	silver hair grass	Non-native
<i>Festuca perennis</i>	Italian rye grass	Cal-IPC Moderate
<i>Anthoxanthum odoratum</i>	sweet vernal grass	Cal-IPC Limited
<i>Hordeum marinum</i>	Mediterranean barley	Cal-IPC Moderate
<i>Bromus hordeaceus</i>	soft chess	Cal-IPC Limited
<i>Festuca subuliflora</i>	crinkle-awn fescue	Native
<i>Poa pratensis</i>	Kentucky blue grass	Cal-IPC Limited
<i>Bromus diandrus</i>	ripgut brome	Cal-IPC Moderate
<i>Dactylis glomerata</i>	orchard grass	Cal-IPC Limited

<i>Luzula subsemissilis</i>	Pacific woodrush	Native
Forbs		
<i>Adenocaulon bicolor</i>	trail plant	Native
<i>Aquilegia formosa</i>	Western columbine	Native
<i>Bellis perennis</i>	English daisy	Non-native
<i>Cichorium intybus</i>	chicory	Non-native
<i>Clinopodium douglasii</i>	yerba buena	Native
<i>Conium maculatum</i>	poison hemlock	Cal-IPC Moderate
<i>Crepis capillaris</i>	hawksbeard	Non-native
<i>Daucus carota</i>	Queen Anne's lace	Non-native
<i>Digitalis purpurea</i>	foxglove	Cal-IPC Limited
<i>Erodium botrys</i>	long beaked filaree	Non-native
<i>Galium aparine</i>	goose grass	Native
<i>Galium muricatum</i>	Humboldt bedstraw	Native
<i>Geranium molle</i>	crane's bill geranium	Non-native
<i>Heuchera micrantha</i>	alumroot	Native
<i>Hypochaeris glabra</i>	smooth cat's ear	Cal-IPC Limited
<i>Hypochaeris radicata</i>	rough cat's ear	Cal-IPC Moderate
<i>Iris</i> sp.	Iris	Native
<i>Lisichiton americanus</i>	yellow skunk cabbage	Native
<i>Lupinus bicolor</i>	annual lupine	Native
<i>Lysimachia arvensis</i>	scarlet pimpernel	Non-native
<i>Marah oregana</i>	man root	Native
<i>Matricaria discoidea</i>	pineapple weed	Native
<i>Mentha pulegium</i>	pennyroyal	Cal-IPC Moderate
<i>Osmorhiza berteroi</i>	sweet cicely	Native
<i>Oxalis corniculata</i>	creeping wood sorrel	Non-native
<i>Plantago lanceolata</i>	English plantain	Cal-IPC Limited
<i>Rumex acetosella</i>	sheep sorrel	Cal-IPC Limited
<i>Rumex crispus</i>	curly dock	Cal-IPC Moderate
<i>Sanicula crassicaulis</i>	Pacific sanicle	Native
<i>Scrophularia californica</i>	California bee plant	Native
<i>Silybium marianum</i>	milk thistle	Cal-IPC Limited
<i>Spergula arvensis</i>	corn spurry	Non-Native
<i>Stachys bullata</i>	Southern hedge nettle	Native
<i>Stellaria media</i>	chickweed	Non-native
<i>Torilis nodosa</i>	short sock-destroyer	Non-native
<i>Trifolium dubium</i>	little hop clover	Non-native
<i>Trifolium repens</i>	white clover	Non-native
<i>Vicia sativa</i>	spring vetch	Non-native
Ferns & Allies		
<i>Equisetum arvense</i>	common horsetail	Native
<i>Pentagramma triangularis</i>	gold back fern	Native
<i>Polystichum munitum</i>	Western swordfern	Native
<i>Pteridium aquilinum</i>	Western bracken fern	Native

Appendix C. Maps

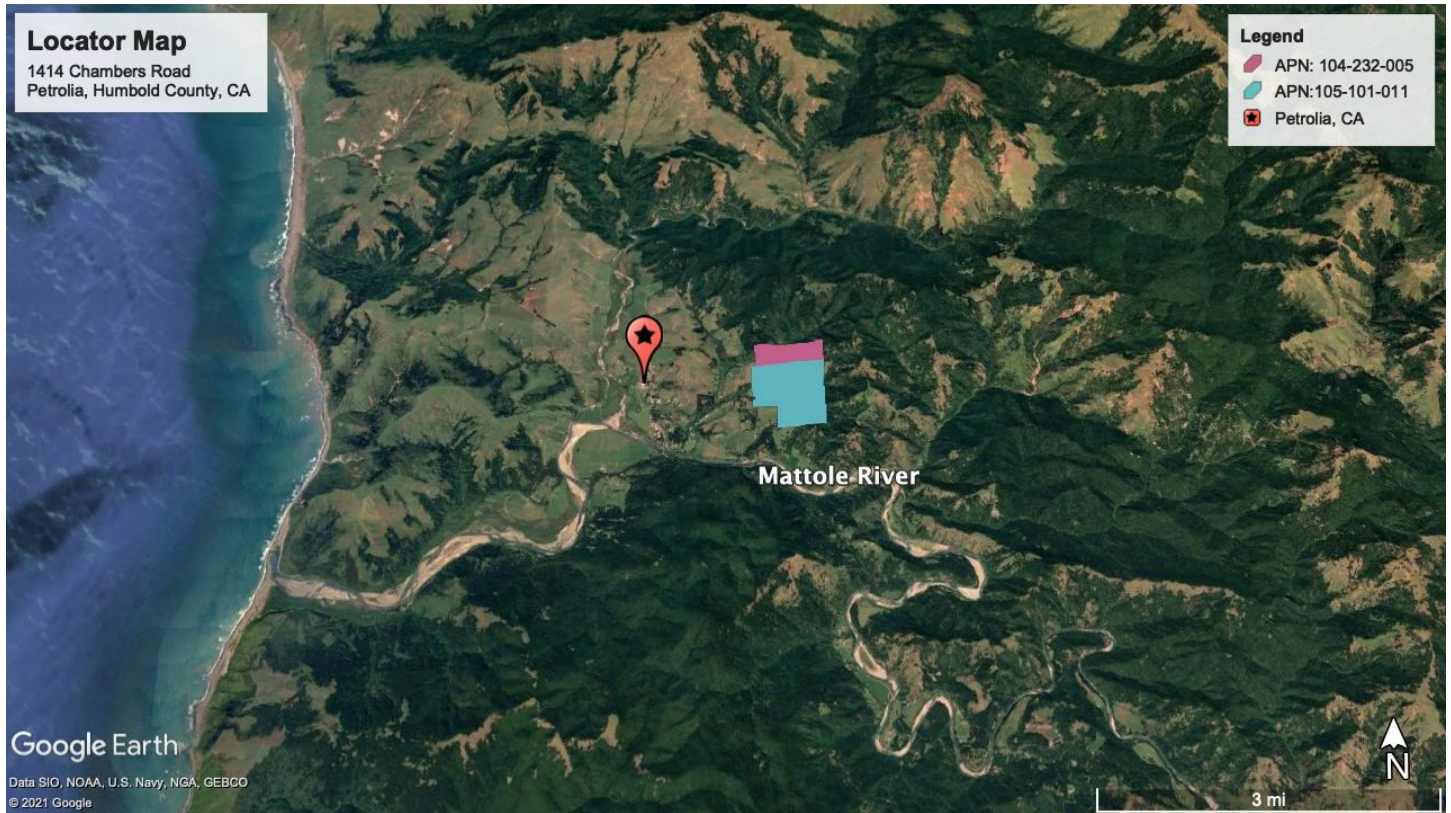


Figure 1. Locator Map of Project Area (blue and pink polygons) and the nearest town of Petrolia, CA (red star).

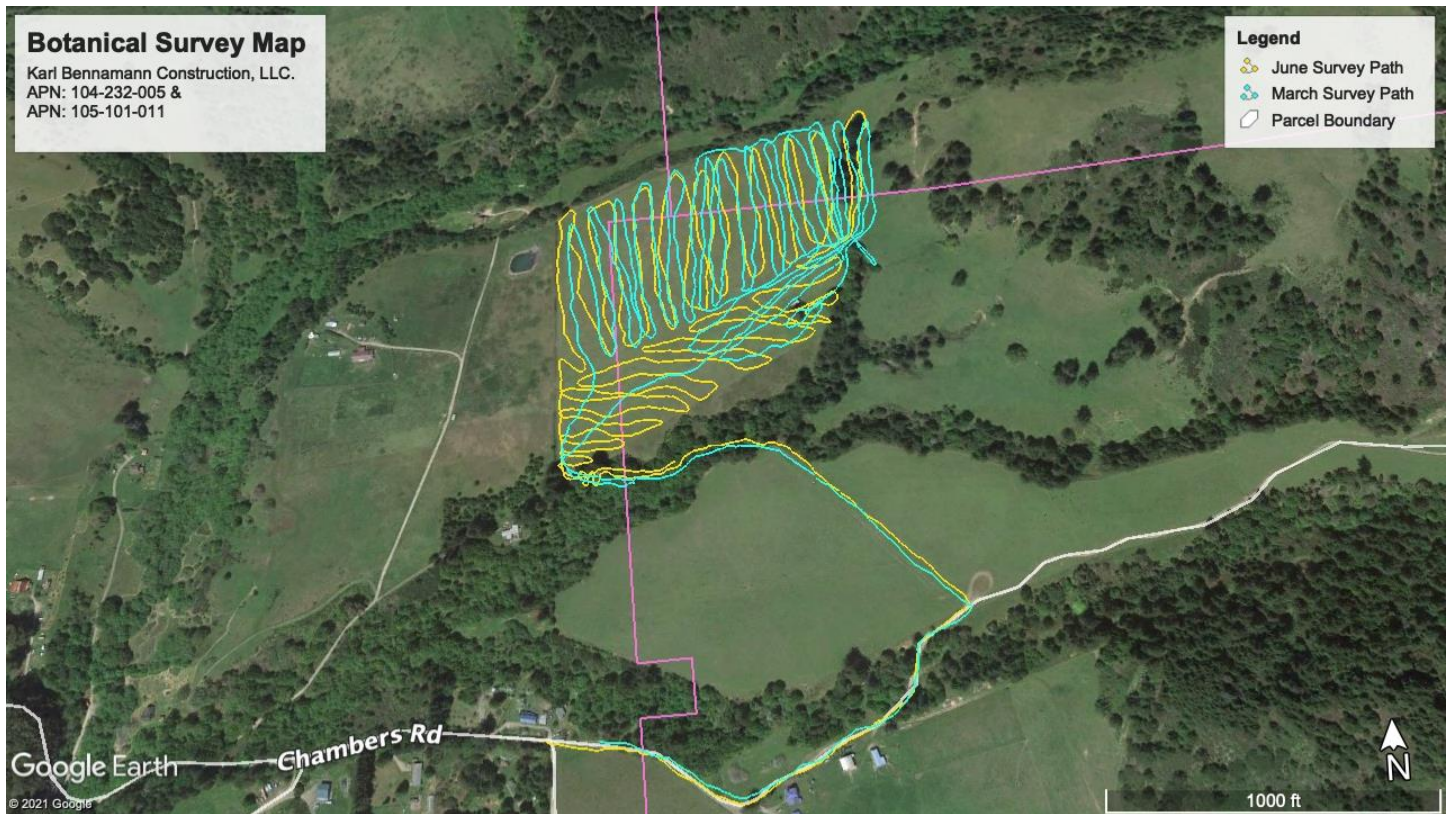


Figure 2. Map of project area and survey routes.

Appendix D. Project Area and Habitats



Figure 3. Project area in coastal prairie habitat, dominated by several invasive grasses, and mixed evergreen forest in background.



Figure 4. Planted Monterey Cypress.



Figure 5. Riparian woodland within northern portion of Mill Creek. Location south, and outside, of project area.

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Assessor Parcel Number (APN):
105 – 101 – 011 & 104 – 232 – 005

Prepared For:

Cisco Farms Inc.

PO Box 1083
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Prepared By:

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Date Prepared:

September 9th, 2021

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X  _____

Mason London, MSc Biology
Naiad Biological Consulting Principal Biologist

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Section 1 Summary of Findings and Conclusions

A Biological Reconnaissance and Project Feasibility Assessment was completed for Cisco Farms, LLC as a preliminary measure to investigate the potential impacts of cannabis cultivation within the established Study Area.

The Study Area defined in this Report is located in Petrolia, California in Humboldt County. Although the seasonal timing of the field visit did not fall within the blooming period of all rare and special-status plant species, the preexisting habitat quality observed within the areas of potential project development, and the habitat observed, suggests it unlikely that special-status plant species, not in bloom during the field survey, are present within the potential proposed site locations, or would be negatively impacted by the project. Regardless of the preexisting habitat quality, since ground disturbance was predetermined to occur in conjunction with the proposed cannabis cultivation project, protocol-level botanical surveys were conducted in the 2021 season as a measure to inventory and assess the potential impacts to listed and special-status plant species that may occur within the project area. No special-status vegetation communities or habitats were observed during the botanical survey of the project area and the adjacent area. No CRPR 1 or 2 plants were observed within the project area.

The presence of one (1) listed special-status animal species, American badger (*Taxidea taxus*), was observed within the Study Area during the site visit investigation. This species was not physically observed, but evidence of its burrows was seen in and around the proposed cultivation site. Impacts to this species can be mitigated and a neutral impact can be achieved if the actions proposed for this project development follow the recommendations made in this Report.

With the proposed recommendations observed, the potential development of this project is not anticipated to cause any major direct or indirect impacts to the surrounding wildlife, environment and/or habitats. However, it has been assumed that prior to implementation of this project, protocol-level pre-construction surveys will be conducted to variety field and data-based observations documented in this Report.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

This Biological Resource Assessment Report has been prepared by request from the client. This Report describes the findings from a biological assessment, which in the case of this document is a reconnaissance survey to assess potential presence of biological resources and sensitive habitat(s). This Report has been prepared as a measure to investigate the impacts of the cultivation of cannabis over two (2) parcels, referred to throughout this Report as the Study Area. This assessment gives special focus to predetermined areas of known environmental superiority for cultivation, based on terrain, slope, habitat, and preexisting disturbance, referred to as the Area Assessed for Project Feasibility in Map 2-4. Even though the potential cultivation areas identified to be feasible for development have preexisting habitat disturbance, all County of Humboldt commercial cannabis cultivation applications, under the Commercial Cannabis Land Use Ordinance (CCLUO) *Application Requirements Cannabis 2.0*, require a “Biological Reconnaissance Survey for Special-Status Species and Sensitive Habitat.”

The biological resource survey for this project is being treated as a biological assessment. A biological assessment, as defined by the United States Fish and Wildlife Service’s (USFWS), is “information prepared by a qualified biologist to determine whether a proposed action is likely to: (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of a species that are proposed for listing; or (3) adversely modify proposed critical habitat. A biological assessment is a specific document required under Section 7 of the Federal Endangered Species Act (FESA) when project actions have the potential to result in “may affect” determination,” (USFWS: Endangered Species Glossary, 2020).

The assessment aspect of this Report presents on the field survey and findings of the biological resource and habitat quality within the Study Area and proposed cultivation site(s). This Report therefore addresses the status and possible utilization of the project site(s) by special-status plant and animal species found within the region, and assesses the environmental impacts to these resources in association to the cultivation of cannabis within the defined project site location(s). Special-status species, both plant and animal, include all state or federal rare, threatened, and/or endangered species and all species listed in the California Natural Diversity Database (CNDDDB) list of *Special-Status Plants, Animals and Natural Communities*.

The locations and presence of aquatic resources, and other sensitive habitats, within the proximity of the proposed cultivation site within the Study Area assessed in this Report, were identified and mapped in order to determine adequate setbacks for the proposed cannabis cultivation to occur. This was done as a measure to address the environmental impacts of the cultivation areas within the Study Area.

This document has been prepared in accordance with legal requirements set forth under Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c), as well as all other acts and programs outlined in *Section 6 Regulatory Guidelines*. The FESA subsection (c) states that “...based on the best scientific and commercial data available, that such species [which are listed or proposed to be listed] may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which [are] likely to be affected by such action. Such assessments shall be completed ... before any contract for construction is entered into and before construction is begun with respect to such action.”¹

This document has also been prepared in response to the State Water Resource Control Board’s Cannabis Cultivation Policy requirement and condition, which states in *Section 1 – General Requirements and Prohibitions*, Term #10 that “...[p]rior to commencing any cannabis land development or site expansion activities, the cannabis cultivator shall retain a Qualified Biologist to identify sensitive plant, wildlife species, or communities at the proposed development site. If sensitive plant, wildlife species, or communities are identified, the cannabis cultivator and Qualified Biologist shall consult with CDFW and CAL FIRE to designate a no-disturbance buffer to protect identified sensitive plant, wildlife species, and communities. A copy of the report shall be submitted to the appropriate Regional Water Board.”²

Since ground disturbance was predetermined to occur in conjunction with the proposed cannabis cultivation project, protocol-level botanical surveys were recommended at the time of the site visits, and have been conducted in conjunction with this biological assessment, as a measure to inventory and assess this projects potential to impact listed and special-status plant species, and sensitive natural communities, that may occur within the project foot print.

This Report summarizes the results of a reconnaissance level biological resource survey which assessed the Study Area for: (1) the potential to support special-status species; and (2) the potential presence of sensitive biological communities such as wetlands, riparian habitats and other sensitive biological resources protected by local, state, and federal laws and regulations. This Report also provides the findings of a protocol-level botanical survey which was conducted in conjunction with this biological resource assessment.

This Report considers the potentially occurring species and communities that could be affected by cannabis cultivation within the Study Area, based on available spatial data, habitat requirements, and observations made during site visits. The project location was targeted within the parcel and evaluated for potential habitat value to protect endangered, threatened, rare, and sensitive species by traversing

¹ **Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c):** <https://www.fws.gov/endangered/laws-policies/section-7.html>

² **State Water Resource Control Board: Cannabis Cultivation Policy:** https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

the Study Area on foot to observe special-status species as well as overall habitat quality and habitat modification.

2.2 Biologist's Qualifications

The biological assessment for this Report was conducted by Mason London. Mason is the primary biological consultant of Naiad Biological Consulting. Mason holds a Master of Science Degree in Biology with a concentration in aquatic ecology from Humboldt State University. Mason has 11 years of experience working professionally as a botanist, wildlife biologist, aquatic ecological research scientist, and has instructed ecological field and classroom courses at the university level.

The botanical field survey described in this report was conducted by Sarah Mason. Sarah is a contracted botanist who holds a bachelor's degree in Botany with a minor in Wildland Soil Science from Humboldt State University. She is currently working towards receiving her MSc in Biology with a concentration in pollination ecology. Sarah has worked as an assistant botanist and biologist with Caltrans, as well as a botanical technician for the Klamath National Forest and Bitterroot National Forest. She has experience in bumblebee identification and teaching plant taxonomy at the university level.

The Golden Eagle/Raptor Survey described in this report was conducted by Phil Johnston. Phil Johnston is a contracted professional Wildlife Tracker and Researcher. Phil received his BS in Wildlife Management and Conservation from HSU and is currently employed as a Mountain Lion and Fisher Biologist for Hoopa Tribal Forestry. Phil has extensive experience working with carnivores in Northern California and is also trained to do Northern Spotted Owl Surveys, Willow Flycatcher surveys, nesting bird surveys and Peregrine Falcon nest surveys.

2.3 Project Description, Study Area Description and Geographic Setting

Cisco Farms Inc. is seeking Conditional Use Permits for 5 acres of new open-air cannabis cultivation and commercial nursery, and Zoning Clearance Certificates for two (2) Cannabis Support Facilities: commercial processing and Community Propagation Center on APNs 105-101-011, 104-232-005, and 104-191-001. Of the 5 acres, 3 acres will be full-sun outdoor, 1 acre light-deprivation in greenhouses with no artificial light, and 1 acre mixed-light in gutter-connect greenhouses with supplemental lighting not to exceed 25 watts/sf. Cultivation will result in 1-3 cycles annually, depending on the method. Nursery facilities total 67,760 sf and include 40,320 sf of greenhouses, 21,440 sf of gutter-connect greenhouses, and 6,000 sf of indoor/enclosed space. The Project proposal includes permitting of proposed facilities and structures that are appurtenant to the cultivation activities, which includes 19,200 sf of drying facilities. Drying and processing will initially occur off-site then move to on-site once these facilities have been constructed. A 3,000-sf commercial processing building is also proposed for both cannabis produced on-site and that produced by other cultivators. (Appendix I)

All irrigation water will be sourced from rainwater catchment. A groundwater well will provide water designated for human use and sanitization only. A total of 2,850,000 gallons of water storage is proposed. Water will be stored on-site in one agricultural pond with 2,650,000-gallon capacity, and forty (40) plastic tanks, each with 5,000-gallon capacity (total 200,000 tank capacity). Total annual water use is projected to be 3,358,070 gallons, and includes an allotted amount for pond evaporation. Cultivation activities will use 2,770,228 gallons (12.7 gal/sf), nursery activities will use 478,025 (7.1 gal/sf), and all other activities will use 109,817 gallons. Power will come from PG&E service and onsite renewables (solar and/or wind). There will be a maximum number of 34 employees during peak operations, with 12 during all other times. Approximately 1,280-sf of farmworker/ employee housing is proposed in modular units that will accommodate up to 8 persons. Domestic water for the housing will be sourced from the well and an OWTS will be installed. Access to the site is from Chambers Road, a paved county-maintained road. In addition, a Transport-only Self Distribution license will be sought at the state level in order to satisfy operational logistics.³

The parcels assessed for the feasibility of cannabis cultivation, referred to as the Study Area, in this Report are Assessor's Parcel Number (APN): 105-101-011 and 104-232-005 (Map 1 & Map 2).

APN: 105-101-011 is 320.70 acres (per Humboldt WebGIS) with a high elevation of approximately 790 feet (approx. 240 meters) and a low elevation of approximately 225 feet (approx. 68 meters) (Google Earth Pro, 2020). This parcel is located in Section 2, Township 2 South, Range 2 West (S2, T2S, R2W) of the Humboldt Base and Meridian (HBM).

APN: 104-232-005 is 108.69 acres (per Humboldt WebGIS) with a high elevation of approximately 860 feet (approx. 262 meters) and a low elevation of approximately 250 feet (approx. 76 meters) (Google Earth Pro, 2020). This parcel is located in Section 2, Township 2 South, Range 2 West (S2, T2S, R2W) of the Humboldt Base and Meridian (HBM).

The approximate center location of the Study Area is located approximately 1.40 air miles east of "downtown" Petrolia, California in Humboldt County (Map 1). Both parcels occur within the Petrolia 7.5-minute USGS quadrangle (Quad code: 4012433) within the Mill Creek watershed. Mill Creek is a tributary of the Mattole River which is a coastal river draining into the Pacific Ocean approximately 5.50 air miles southwest of the center location of the parcels (CDFW Region: 1). The center location of the Study Area is 40°19'26.9"N 124°15'36.1"W. Both parcels are zoned as Agriculture Exclusive (AE) which allows to be utilized for "[a]ll general agricultural uses, including accessory agricultural uses..."⁴(Humboldt County Code Zoning Regulations: Title III Land Use and Development - *Section 314-6.6*). Both parcels have a Current General Plan of Agriculture Grazing (AG) which "... applies to dry-land grazing areas in relatively small land holdings that support cattle ranching or other grazing supplemented by timber harvest activities that are part of the ranching operation, and other non-prime

³ Project Description verbiage from the project's Executive Summary provided to Naiad Biological Consulting by Cisco Farms Inc.

⁴ **Humboldt County Code – Zoning Regulations:** <https://humboldt.gov/DocumentCenter/View/4029/Humboldt-County-Zoning-Regulations-PDF?bidId=>

agricultural lands. Residential uses must support agricultural operation...⁵(2017 Humboldt County General Plan, 2017). Allowable use types of parcels with an AG general plan include “general agriculture,” as well as “intensive agriculture.”

The entire Study Area occurs within an Agricultural Preserve under the California Land Conservation Act of 1965, better known as the Williamson Act. This act was created for counties to protect viable agricultural land by offering a tax incentive to property owners for keeping their land in agricultural production. Under the jurisdiction of the act, the County “...requires that the land be used for producing of agricultural commodities for commercial purposes and uses compatible with agriculture.”⁶(County of Humboldt, 2020).

⁵ **Humboldt County General Plan:** <https://humboldtgov.org/DocumentCenter/View/62021/Section-48-Land-Use-Designations-PDF?bidId=>

⁶ **Humboldt County – Williamson Act Lands:** <https://humboldtgov.org/DocumentCenter/View/4350/Williamson-Act-Informational-Brochure-PDF-?bidId=>

Section 3 Methods

3.1 Pre-Site Visit Data Compilation and Preparation

A list of special-status plant and animal species considered to have potential presence within the Study Area was downloaded from the California Department of Fish and Wildlife's California Natural Diversity Database Biogeographic Information and Observation System (CNDDDB BIOS) (CDFW, 2020), the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2020) and Calflora Project (Calflora, 2020) for the USGS Petrolia 7-quad area. Animals on the CNDDDB list were primarily included based on state or federal listing status or CDFW designation. Native pollinators found in the area were also included based on the state rarity and their potential to be affected by cannabis cultivation.

Aside from the creation of a target list of special-status species, the Regional Dominant Alliances for the Study Area was downloaded, mapped, and assessed from The U.S. Forest Services' Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) (Map 5). The CALVEG system was developed to classify California's existing vegetation communities for use in statewide resource planning considerations. This was originally accomplished with the use of color infrared satellite imagery and field verification of types by current soil-vegetation mapping efforts as well as professional guidance through a network of contacts throughout the state. It is a hierarchical classification originally based on "formation" categories: forest, woodland, chaparral, shrubs and herbaceous in addition to non-vegetated units. They were originally identified by distinctions calculated among canopy reflectance values used in the LANDSAT satellite. Since then, the classification has been expanded from an initial 129 types occurring throughout the eight regions of the state to the current 213 occurring in nine regions, and image resolution has been enhanced.

The special status species in the 7.5 minute USGS Petrolia quadrangle, and the six (6) adjacent quadrangles (generally this search renders eight (8) adjacent quadrangles, but the Petrolia quadrangle is east of the Pacific Ocean and therefore there are no quadrangles to the west or southwest), resulted in twenty six (26) special-status animal species (5 amphibians, 9 birds, 5 fishes, 1 insect, 5 mammals, 1 reptile) (Table 1), thirty two (32) special-status plant (1 lichen, 31 Vascular) (Table 2) and two (2) special status habitat communities (Coastal and Valley Freshwater Marsh and Coastal Douglas Fir Western Hemlock Forest).

3.2 Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted within the Study Area between 1000 and 1400 on July 3, 2020 by Mason London (Map 3). The weather was sunny and clear. There had been no rainfall in the weeks prior to the site visit.

The goal of the investigation and field survey was to determine suitable habitat for special-status species, and therefore potential impact to these species, within the Study Area and with special focus to the area determined to be feasible for cultivation development. Impact to potentially occurring special-status species was assessed based on the likelihood for the project, and project related activities, to result in *take*, or *incidental take*, of the previously mentioned species (Table 1 & 2). The Federal Endangered Species Act (FESA) defines *take* as any action that will "...[h]arass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C., §1532 (19)⁷). Whereas *harass* is defined as "[a]n intentional or negligent act or omission which *creates the likelihood of injury* to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns (e.g., breeding, feeding, or sheltering)" (16 U.S.C., §1532 (20); 50 C.F.R. § 17.3⁸) and *harm* is defined as "[a]n act which actually kills or injures wildlife. May include significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavior patterns," (U.S.C., §1532 (20); 50 C.F.R. § 17.3.⁹). The Study Area habitat and habitat characteristics were investigated and assessed based on these impact parameters.

As part of the initial reconnaissance of the Study Area's biological resources, suitable habitat for potential species was inspected during the field survey. A meandering, or wandering transect, approach to the survey was implemented in order to cover all habitats that could potentially be utilized by listed species. This survey path was recorded using Avanza Maps™ (Map 3).

An assessment of potential occurrences of special-status animal species was recorded during the meandering survey throughout the Study Area. All major habitats within the Study Area were investigated in order to determine current quality in context of species acquisition. The assessment of animal habitat within the Study Area is not an official protocol-level survey, which may be required for project approval by local, state, or federal agencies. Specific wildlife surveys may be required based on the specific location and timing of project development.

Dominant species in surrounding habitats, presence of sensitive habitats such as riparian areas and potential wetland features, and project site setbacks from watercourses and other aquatic habitats were observed and recorded. These observations were used to determine the most suitable and environmentally superior location(s) to potentially cultivate cannabis within the Study Area. A TruPulse 200X laser rangefinder was used to make all of the distance and slope measurements and for determining adequate setbacks in the field. True buffers and setbacks, used in all of the maps associated with this Report were generated with GIS software out of the field.

⁷ CESA to the Federal Endangered Species Act Definitions: <https://wildlife.ca.gov/Conservation/CESA/FESA>

⁸ CESA to the Federal Endangered Species Act Definitions: <https://wildlife.ca.gov/Conservation/CESA/FESA>

⁹ CESA to the Federal Endangered Species Act Definitions: <https://wildlife.ca.gov/Conservation/CESA/FESA>

3.2.1 Floristic Survey

Since ground disturbance was predetermined to occur in conjunction with the proposed cannabis cultivation project, protocol-level botanical surveys were recommended at the time of the site visit and conducted during the 2021 bloom season as a measure to inventory and assess the potential impacts to listed and special-status plant species that may occur within the project area.

Complete details of these seasonally appropriate botanical surveys, as well as findings and recommendations, can be seen in Appendix G.

3.2.2 Wetlands, Soils and Streamside Management Areas Assessment and Determination

Prior to the site investigation, the Study Area was assessed for the presence of wetlands utilizing several digital databases and resources including the USFWS National Wetland Inventory (NWI), NRCS Web Soil Survey, USGS topographic maps, and inundation or saturation visible on aerial imagery (Map 4). Data regarding the Study Area's soil type was obtained from the Natural Resource Conservation (NRCS) Service Web Soil Survey (Map 4; Appendix E).

No soil test pits were dug for evaluating the presence of hydric soil since other wetland indicators such as hydrophytic vegetation and wetland hydrology were visible during the time of the site visit investigation. However, only potential wetland features surrounding the proposed cultivation sites were targeted. The "error on the side of caution" approach to determining potential wetland habitats was implemented when visually assessing the site and determining setbacks. Field observations of identifiable plant communities were used to assist interpretation of aerial imagery in defining potential wetland areas and their boundaries. A thorough investigation during the spring would be more appropriate for evaluating the presence of wetland hydrology. The general extent of these potential wetland features was digitized utilizing field observations of plant communities and aerial imagery. Test pits for determining hydric soil presence would be recommended for confirming the determinations of potential wetland features within the Study Area. The assessment of wetlands within the Study Area described in this Report is not an official protocol-level survey, which may be required for project approval by local, state, or federal agencies.

Watercourses and their associated classes were determined, based on the Forest Practice Rules Water Course and Lake Protection Zone definitions by use of visual observation when conducting the field visit on July 3rd, 2020.

3.2.3 Occurrence of Special-Status Species

Each species derived from the previously mentioned databases were evaluated for their potential of occurrence within the project site by the following criteria:

1. “**None.**” Species listed as having “none” potential of occurrence are those species for which there is no suitable habitat within the project area (elevation, hydrology, plant community, disturbance regime, etc.)
2. “**Low.**” Species listed as having a “low” potential of occurrence are those species for which there is no known occurrence of the species within the project area and there is limited or marginal suitable habitat present at the project area.
3. “**Moderate.**” Species listed as having “moderate” potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is suitable habitat present within the project area.
4. “**High.**” Species listed as having “high” potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is highly suitable habitat present within the project area.
5. “**Present.**” Species listed as having “present” potential of occurrence within the project area are those species for which the species was observed during the field survey.

Species with a ‘low’ potential of occurrence were not further investigated for likelihood to exist within or utilize the project site habitat. A rank of low was given to species that most likely will not occur, or are highly unlikely for them to occur, based on their habitat requirements. However, there are always exceptions to natural rules and so these species were not given the rank of ‘none’ because it is not entirely impossible for them to occur, just extremely unlikely.

Section 4 Results and Discussion

4.1 Study Area's Regional Alliances

The Regional Dominate Alliances within the Study Area, according to the CALVEG database, consist of: Annual Grasses and Forbs Alliance, Pacific Douglas-Fir Alliance, and California Bay Alliance (Map 5). The Alliance definitions below were taken from CALVEG and do not represent actual observations made, or necessarily species identified during the site visit investigation.

4.1.1 Annual Grasses and Forbs Alliance

Small areas of dry grasslands are found scattered at moderately low elevations in the western Klamath Mountains, especially on privately owned lands and in the western Trinity Alps area. In the Ranges and Coast Sections, these areas become more extensive on private lands scattered throughout the area and intermix with agriculturally managed sites. Species include introduced and native annual grasses such as Brome (*Bromus spp.*), Bluegrass (*Poa spp.*), Wildoats (*Avena spp.*), Fescue (*Vulpia spp.*), Dogtail (*Cynosurus spp.*), Barley (*Hordeum murinum*), Needlegrass (*Nassella spp.*), Oatgrass (*Danthonia spp.*), and a variety of forbs such as Checker Mallow (*Sidalcea spp.*), Brodiaea (*Brodiaea spp.*), Wild Hyacinth (*Dichelostemma spp.*), Yampah (*Perideridia spp.*) and Mariposa Lily (*Calochortus spp.*). Oregon White Oak (*Quercus garryana*) stands are often found adjacent to some upland annual grasslands.

4.1.2 Pacific Douglas-Fir Alliance

Douglas-fir (*Pseudotsuga menziesii*) is the dominant overstory conifer over a large area in the Mountains, Coast, and Ranges Sections. This alliance has been mapped at various densities in most subsections of this zone at elevations usually below 5600 feet (1708 m). Sugar Pine (*Pinus lambertiana*) is a common conifer associate in some areas. Tanoak (*Lithocarpus densiflorus var. densiflorus*) is the most common hardwood associate on mesic sites towards the west. Along western edges of the Mountains Section, a scattered overstory of Douglas-fir often exists over a continuous Tanoak understory with occasional Madrones (*Arbutus menziesii*). When Douglas-fir develops a closed-crown overstory, Tanoak may occur in its shrub form (*Lithocarpus densiflorus var. echinoides*). Canyon Live Oak (*Quercus chrysolepis*) becomes an important hardwood associate on steeper or drier slopes and those underlain by shallow soils. Black Oak (*Q. kelloggii*) may often associate with this conifer but usually is not abundant. In addition, any of the following tree species may be sparsely present in Douglas-fir stands: Redwood (*Sequoia sempervirens*), Ponderosa Pine (*P. ponderosa*), Incense Cedar (*Calocedrus decurrens*), White Fir (*Abies concolor*), Oregon White Oak (*Q. garryana*), Bigleaf Maple (*Acer macrophyllum*), California Bay (*Umbellifera californica*), and Tree Chinquapin (*Chrysolepis chrysophylla*). The shrub understory may also be quite diverse, including Huckleberry Oak (*Q. vaccinifolia*), Salal (*Gaultheria shallon*), California Huckleberry (*Vaccinium ovatum*), California

Hazelnut (*Corylus cornuta* var. *californica*), Poison Oak (*Toxicodendron diversilobum*), Oceanspray (*Holodiscus discolor*), Hairy Honeysuckle (*Lonicera hispidula*) and a wide range of other shrubs and forbs.

4.1.3 California Bay Alliance

This woodland type is almost completely composed of California Bay (*Umbellularia californica*). It occurs in scattered small stands, generally away from the immediate coast on exposed slopes and ridges from the Oregon border southward below about 3000 feet (915m) in eleven subsections in the Coast and three subsections of the Ranges Sections. California Bay also is adapted to seawinds of coastal environments, especially towards the south. For example, this type has been mapped extensively in the Marin Hills and Valley Subsection (Coast), where it associates with trees and shrubs such as Redwood (*Sequoia sempervirens*), Douglas-fir (*Pseudotsuga menziesii*), Tanoak (*Lithocarpus densiflorus*) and Coyote Bush (*Baccharis pilularis*) near the coast. Other hardwoods such as Canyon and Coast Live Oaks (*Quercus chrysolepis*, *Q. agrifolia*) may be found in these stands further inland. Tree Chinquapin (*Chrysolepis chrysophylla*), Berries (*Rubus* spp.), and species of Ceanothus may also occur as minor associates of this type.

4.2 Observed Study Area Habitat, Existing Site Conditions and Project Location Feasibility

The main habitats investigated within the Study Area consists of large open upland grassland fields, open pasture for cattle grazing, riparian corridors, and watercourses. These habitats were assessed based on habitat quality parameters in relationship to previous habitat modification. These habitats were also assessed based on the potential to harbor special-status species. The watercourses within the Study Area were also investigated and adequately buffered with setbacks to the proposed project area (Map 2).

4.2.1 APN: 105-101-011

The habitats investigated within APN: 105-101-011 consist of an open pasture, riparian corridor, Class II intermittent watercourses (unnamed tributaries to Mill Creek) and Class III unnamed tributaries (Map 2). The riparian corridor is dominated by bigleaf maple (*Acer macrophyllum*), California bay laurel (*Umbellularia californica*), Douglas fir (*Pseudotsuga menziesii*) and California buckeye (*Aesculus californica*) (Photo 1). The dominant species observed in the understory of this habitat is poison oak (*Toxicodendron diversilobum*) and Himalayan blackberry (*Rubus armeniacus*). Species observed within the Class II channel were poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus armeniacus*), Pacific blackberry (*Rubus ursinus*), rough dog's-tail (*Cynosurus echinatus*), pennyroyal (*Mentha pulegium*), quaking grass (*Briza maxima*), flatweed (*Hypochaeris radicata*), St. Johns'-wort (*Hypericum perforatum*), coyote brush (*Baccharis pilularis*), pearly everlasting (*Anaphalis*

margaritacea), wild carrot (*Daucus carota*), field mustard (*Brassica rapa*), sheep sorrel (*Rumex acetosella*), sword fern (*Polystichum munitum*), ribwort plantain (*Plantago lanceolata*), sedge (*Carex spp.*), rush (*Juncus spp.*) and a few immature Pacific Madrone (*Arbutus menziesii*) (Photo 2 - 3). Due to the seasonal timing of this site visit, the majority of the species within the disturbed open pasture habitat were unidentifiable, however, it is apparent that this area is dominated by many nonnative species, as well as some native forb and grass species (Photo 4 - 5). Another unnamed Class II watercourse, a tributary of Mill Creek, was identified in the middle of the Study Area, north of the previously mentioned watercourse (Photo 6). This watercourse is not anticipated to be impacted by the proposed project. There is one stream crossing with a plastic culvert that may need to be adequately sized and replaced, however, the culvert sizing was not calculated during the July 3, 2020 field visit and may need further investigation (Photo 7). A Class III unnamed watercourse, which is the northern most tributary of the Class II watercourse previously described, was also identified in the northern portion of the parcel and is not anticipated to be impacted by the proposed project in anyway (Photo 8; Map 2)

No special-status species in bloom at the time of the field survey were observed. The previous species mentioned are to describe the general habitat type and habitat quality (based on the abundance of invasive species) and the listing of these species does not represent an official protocol-level survey (which can be found in Appendix G).

A conservative buffer of 100 ft has been placed around the riparian corridor habitat in order to follow the most conservative setback requirements (Map 2). This buffer was established at the edge of the riparian corridor which is in accordance with the Humboldt County Streamside Management Ordinance (1995), as amended by the Humboldt County General Plan, which states that the buffer distances are to be “[m]easured as the horizontal distance from the top of the bank or the edge of riparian drip-line, whichever is greater on either side of the stream,” and according to the most conservative buffer as required by the California State Water Resource Control Board (Section 1, Requirement 37 of Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation¹⁰).

4.2.2 APN: 104-232-005

The habitats investigated within APN: 104-232-005 consist of open pasture, riparian corridor, and a Class I watercourse (Mill Creek) (Map 2). The dominate species within the habitat features within the parcel are the same was the previously listed species within APN: 105-101-011. These species are mentioned here to describe the general habitat type and the listing of these species does not represent an official protocol-level survey, which may be required for project approval by local, state, or federal agencies.

The Class I watercourse was given a buffer of 150 ft following the guidance from the Humboldt County Streamside Management Ordinance, and adhere to the most conservative buffer as required by the

¹⁰ State Water Resources Control Board: Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

California State Water Resource Control Board (Section 1, Requirement 37 of Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation) (Map 2).

4.2.3 Area Assessed for Project Feasibility

Based on results of the aquatic resource setbacks, a large majority of the open pasture, in the southwestern portion of the parcel, and continuing into the northwestern portion of APN: 105-101-011, is suitable for development of cannabis cultivation, referred to as the Area Assessed for Project Feasibility (Photo 9 - 10; Map 2). This area is highly degraded from its natural habitat, resulting in low habitat quality in regards to preexisting habitat modification, as a result of over a century of cattle grazing (See the Botanical Survey Report in Appendix G for a complete list of species present). Utilizing the open pasture habitat for cannabis cultivation would likely render no negative impact to the environmental or biological resource based on the habitat quality and the location and setback to sensitive habitats (Photo 8). As a measure to investigate this determination, and practice due diligence, protocol-level botanical surveys, as well as the initiation of nesting raptor bird surveys and raptor prey surveys of the area have been completed.

Developing a cultivation site at this location would require no need to clear brushy vegetation, and would require no extensive grading as a result of the level of prolonged disturbance at this site. This particular site location already has drivable access and therefore could easily be accessed with minimal to no disturbance to the surrounding habitats. Depending on the cultivation method associated with the proposed project, a power drop may need to occur near this site to be connected to PG&E grid power. Mitigation for potential disturbance associated with the cannabis cultivation activities is further discussed in *Section 5 Conclusion*.

4.3 Watercourses, Aquatic Habitats, and Streamside Management Areas

The watercourses observed and documented within the Study Area were all buffered following both state and county setback requirements (Map 2). These buffers have been established as the Streamside Management Areas (SMA) as per Section 1, Requirement 37 of the California State Water Resource Control Board's *Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation*¹¹ (Map 2). The determination of the watercourse classes is based upon the Forest Practice Rules Water Course and Lake Protection Zone definitions (California Code of Regulation, title 14, Chapter 4. Forest Practice Rules, Subchapters 4, 5, and 6 forest District Rules, Article 6 Water Course and Lake Protection¹²).

The location within the Study Area that was determined to be feasible for cannabis cultivation is not anticipated to cause any negative interface with the Mattole River, or its tributaries, since the necessary

¹¹ State Water Resources Control Board: Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation: https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

¹² Forest Practice Rules Water Course and Lake Protection Zone definitions: <https://www.law.cornell.edu/regulations/california/title-14/division-1-5/chapter-4/subchapter-6/article-6>

buffered setbacks will be followed. Impacts to watercourses may occur when updating the stream crossings. Mitigation measures to avoid impact to biological resources utilizing these aquatic habitats is explained in the recommendation section of this Report. Furthermore, the potential impacts to the aquatic habitats within the Study Area can be minimized if best management practices (BMP) are used during the construction and development of the project site (Appendix F).

There is no anticipated impact to these watercourses, or any aquatic habitat in association with this project, if these buffers and setbacks are adhered to and if the project development and construction follows the recommendations presented in *Section 5.1.3*.

4.3.1 Wetland Habitats

The utilization of visual assessment methods to detect presence of hydrophytic vegetation and wetland hydrology rendered no such habitat features within a proximity to the proposed project. The entire Study Area was not visually assessed with equal effort and therefore wetland habitats may occur in areas not surveyed within the Study Area. The area assessed occurred within a proximity to the proposed project area that could result in impact or affect to such habitat features, and in compliance with state and county setbacks (100 ft). No further wetland delineations or assessments are recommended for project approval.

4.3.2 Study Area Soils

The general soil types, presented as Soil Map Units on Map 4, were obtained from the Web Soil Survey and presented in further detail in Appendix E.

The Area Assessed for Project Feasibility primarily occurs within the Map Unit 152- Benbow, and a small portion in the Map Unit 151- Parkland-Garberville complex (Map 4). Full soil type descriptions can be found in Appendix E.

4.4 Special-Status Plant Species and Communities

4.4.1 Definitions

Special status plants include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) in addition to plants which meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). CDFW recommends that plants on California Rare Plant Ranks (CRPR) Lists 1A (presumed extinct or extirpated), 1B (rare, threatened, or endangered in California and elsewhere), 2A (presumed extirpated) and 2B (rare, threatened, or endangered in California but more common elsewhere), or other species that warrant consideration based on local or biological significance, be addressed during California Environmental Quality Act (CEQA) review of proposed projects. Plants of rank 3 and 4, which are under review and watch lists respectively, are addressed by Naiad Biological Consulting, and may warrant consideration under CEQA if potential or cumulative impacts to the plant exist.

CDFW's natural community rarity rankings follow NatureServe's 2012 NatureServe Conservation Status Assessment: Methodology for Assigning Ranks, in which all alliances are listed with a global (G) and (S) rank. NCSC are those natural communities that are ranked S1 to S3 (CDFW, 2020), where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

4.4.2 Special-Status Plant Species and Communities Observed

No CRPR 1 or 2 plants were encountered in the project area. *Hesperocyparis macrocarpa* (Monterey cypress), a CRPR of 1B.2 in its natural range, was observed during surveys but is believed to be a planted ornamental and should not be impacted by cultivation operations.

No special-status vegetation communities or habitats were observed during the botanical survey of the project area. The project area habitat is typical of valley and foothill grasslands and coastal prairie within the lower foothills of the Northern Coast Ranges. The surrounding areas are typical of North Coast coniferous forest and mixed evergreen forest, dominated by Douglas-fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*). There is a small stretch of riparian woodland, where a portion of Mill creek runs through, just south of the project area and along the road leading to the pasture. There is no canopy or shrub layer within the project area. Some native grasses are present, including *Festuca idahoensis*, but no sensitive natural communities could be established during surveys due to the large amount of invasive grasses present, consistent with historic grazing. Complete description and findings from the protocol-level botanical surveys is presented in Appendix G.

Because of the low quality of the habitat within the project area due to historic grazing, agricultural uses of the proposed project area, and associated invasive species, proposed cultivation operations are unlikely to harm any special status plants or sensitive natural plant communities. Even though no foreseeable impacts to sensitive species or sensitive habitats are likely to occur at the Area Assessed for Project Feasibility, the project should still minimize disturbance when developing the project area by following the Best Practicable Treatment or Control (BPTC) and Best Management Practices (BMPs) presented in Appendix F.

4.5 Special-Status Animals Species

Not all previously mentioned habitats within the Study Area were surveyed for special-status animal species potential utilization with equal effort. The habitats investigated for presence and habitat requirements of special-status animal species consist primarily of the habitats that could be impacted by the project development and its associated activities. It is assumed that disturbance of special-status animal species habitat could result in take, or incidental take, of the species determined to utilize these habitats. Regardless of the habitats investigated, all species derived from the CNDDDB list were

assessed for potential occurrence within the Study Area, both within the potential project area (the Area Assessed for Project Feasibility), and within the surrounding habitats (the Study Area) (Table 1).

4.5.1 Special-Status Animals Species with Potential for Occurrence

Within the locations determined to be feasible sites for project development, moderate potential habitat for five (5) special-status animal species exists. Two (2) of these five (5) species are Cooper's hawk (*Accipiter cooperii*) and Golden Eagle (*Accipitridae chrysaetos*) would only utilize the proposed project site for hunting/foraging and would otherwise only pass over in flight (Table 1). These species would not utilize the potential project site locations for nesting or shelter due to the void of canopy cover and other structures. Moreover, depending on the cultivation method proposed for these potential projects, mitigating the production of noise or light pollution is recommended in order to avoid the potential take from indirect disturbance of species utilizing surrounding habitats (see *Section 5 Conclusion*).

Since the Area Assessed for Project Feasibility does include potential hunting/foraging grounds for these species, raptor surveys have been initiated for this project. On August 22nd, 2021, a Nesting Bird Survey and a Prey Survey was conducted following CDFW recommended protocols. The Prey Survey was conducted to determine suitable forage for target species such as black-tailed jackrabbits, brush rabbits, and California ground squirrels. The Nesting Bird Survey was conducted as a measure to determine if any listed raptors are currently nesting within a proximity of impact to the Areas Assessed for Project Feasibility. A follow-up Nesting Bird Survey will be conducted in conjunction with this Fall survey, in the mid to late winter in early 2022 to confirm findings from this initial survey. An interim report of the initial findings of these surveys is presented in Appendix H.

Based on the initial findings of the raptor surveys, it is likely there will be no direct impact to Cooper's hawk, Golden Eagle, or other special-status raptor species that may reside in nearby habitats outside of the Study Area. The follow-up raptor survey in February will serve to confirm the presence/absence of the aforementioned species. Regardless of such findings, the project as currently proposed is capable of avoiding impact by mitigating any indirect disturbances that result from proposed activities.

The remaining three (3) special-status species, with a potential of being directly impacted by the proposed project, include the Western Bumblebee (*Bombus occidentalis*), the North American porcupine (*Erethizon dorsatum*) and the American badger (*Taxidea taxus*).

Western Bumblebee (*Bombus occidentalis*) is widely distributed in California and is known to pollinate a wide variety of flowering plants. This species lives in abandoned burrows and cavities and potential nesting locations may exist within the suitable project areas. Due to the project areas habitat quality, and due to the abundant suitable habitat within the Study Area, it is unlikely that there would be a significant loss of nesting habitat as a result of project development. Furthermore, it is unlikely that the potential project development would result in a significant decrease in forage material due to the existence of similar homogeneous habitat throughout the broader Study Area to that found within the

Area Assessed for Project Feasibility. It is not anticipated that the project will negatively impact this species.

North American Porcupine (*Erethizon dorsatum*) can be found in forested habitats in broadleaf upland forest, cismontane woodland, and lower and upper montane conifer forest. Even though this species may reside nearby and could pass through the project site while foraging, the lack of cover within the project area makes it unlikely that this species would utilize open field habitat. Also, the frequent human activity that occurs within the Study Area likely results in *Erethizon dorsatum* not utilizing the site. It is not anticipated that the project will negatively impact this species.

American badger (*Taxidea taxus*) is most abundant in drier open stages of most shrub, forest, and herbaceous habitats. *Taxidea taxus* requires sufficient food, friable soils (soils with a crumbly texture) and open, uncultivated ground. This species preys on burrowing rodents and digs burrows. There was evidence of *Taxidea taxus* activity in the Area Assessed for Project Feasibility. No *Taxidea taxus* were observed during the site visit since they are generally nocturnal, however, many burrows were observed within the pasture habitat (Photo 11).

One of the main prey species of *Taxidea taxus* are pocket gophers (*Thomomys monticola* and *T. bottae*). It has been shown that *Thomomys monticola* and *T. bottae* densities are significantly higher in grazed meadows than ungrazed meadows (Powers et al. 2011). Therefore, there is a direct correlation to grazed pasture habitats and suitable habitat for *Taxidea taxus*. The percentage of pasture that is proposed to be converted to cannabis cultivation will likely not create a significant loss to the surrounding *Taxidea taxus* habitat (Map 2). The suitable grazed habitat surrounding the Area Assessed for Project Feasibility will still be regularly grazed and will therefore likely maintain suitable habitat for *Taxidea taxus* to forage.

Though the habitat of the potential project area is suitable for *Taxidea taxus*, the amount of development that would occur in association with the cannabis cultivation makes it likely that this species would not continue to utilize the project site for burrowing and hunting if already present. Recommendations to avoid take of this species are explained in recommendation section of this Report. The surrounding suitable habitat is not to be disturbed in anyway related to proposed project activities and therefore this species is still capable of existing within the Study Area without a negative impact. Furthermore, depending on the cultivation methods utilized, all noise and light pollution will be mitigated and will therefore not disrupt the nocturnal life history of this species.

If the BMP are followed for this project, there will be no anticipated impact to these terrestrial and aquatic species, or the terrestrial and/or aquatic riverine habitat from the activities associated with this project.

4.5.1 Other Special-Status Animal Species

The nearest known **northern spotted owl (*Strix occidentalis caurina*)** Activity Centers (AC), according to the most up to date CNDDDB Spotted Owl Viewer, are approximately 1.55 air miles (HUM0010) south to southeast of the nearest boundary of Area Assessed for Project Feasibility (Map 7; Occurrence Report 1).

It is stated in the County of Humboldt's 2018 resolution certifying the EIR for the CCLUO, in *Mitigation Measure 3.4-1e: Northern spotted owl preconstruction habitat suitability surveys and determination of presence or absence*¹³, "[i]f the area of proposed new development activities is within suitable habitat for northern spotted owl (e.g., coniferous forest), and is within 1.3 miles (average species home range) of a known occurrence of northern spotted owl, as determined by a qualified biologist, the following measures shall be followed.

Prior to removal of any trees, or ground-disturbing activities adjacent or within suitable nesting, roosting, or foraging habitat (e.g. forest clearings) for spotted owl, a qualified biologist, familiar with the life history of the northern spotted owl, shall conduct preconstruction surveys for nests within a 1.3-mile buffer around the site as described in Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls (USFWS 2012). Surveys shall take place between March 1 and August 31. Three complete surveys spaced at least 7 days apart must be completed by June 30. Six complete surveys over the course of 2 years must be completed to determine presence or absence of northern spotted owl."

The County of Humboldt's 2018 resolution certifying the EIR for the CCLUO goes on to state that "[i]f northern spotted owls are determined to be absent 1.3 miles from the site, then further mitigation is not required." Since the nearest known AC is further than 1.3 miles away from the Area Assessed for Project Feasibility, a disturbance and habitat modification assessment to determine the presence of the species is not necessary.

Furthermore, northern spotted owl resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 meters. They usually nest in trees or snag cavities, or in broken tops of large trees (Polite C. 1990). Roost selection for northern spotted owl is "... related closely to thermoregulatory needs [since they are] intolerant of high temperatures." Because of this, northern spotted owl "[r]oost in dense overhead canopy on north-facing slopes in the summer," (Zeiner, D.C. et al, 1988-1990. The Study Area does not exhibit this species' preferable forest type, due to the size, structure, and species of the trees within the Study Area, and is therefore not likely utilized for nesting, roosting, or foraging/hunting by northern spotted owl (Photo 9 & 10). The Area Assessed for Project Feasibility is entirely flat and open, with no habitat or vegetation for nesting or roosting and all habitat modification associated with this project is determined to have no impact to

¹³ County of Humboldt's 2018 resolution certifying the EIR for the CCLUO: <https://humboldt.gov/DocumentCenter/View/63736/Resolution-18-40-Certifying-Final-EIR-PDF>

any aspect of northern spotted owl's life history. Because of this, the Area Assessed for Project Feasibility would not be utilized by this species for foraging and/or hunting.

Surrounding the Study Area (off site of the parcel), there is moderate suitable habitat for northern spotted owl, but if the recommendations made in *Section 5.1.3* are followed, all potential direct or indirect impacts to this species can be mitigated. The Area Assessed for Project Feasibility is outside of any area of disturbance to potential northern spotted owl residing in this nearby habitat to be affected.

Even though this project will not "...remove or modify spotted owl nesting, roosting or foraging habitat...", according to the *USFWS Northern Spotted Owl Survey protocol: Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*, the "... protocol should also be applied to activities that disrupt essential breeding activities and to activities that may injure or otherwise harm spotted owl other than through habitat modification (e.g., noise disturbance, smoke from prescribed fire)," (USFWS, 2012). It is noted that in general, noise levels of 70 dB or less, would not generate a significant disturbance unless within very close proximity (<25 m) to an active nest (USFWS 2006). Since all activities associated with the development of the proposed cultivation area will have cultivation methods that will mitigate all noise and light pollution, there is no expected disruptions towards essential breeding activities or any activities that may injure or harm this species, or any other species, related to this project. There will be no need for generators (except for backup power) since the parcel will be utilizing grid and solar power, and the applicant can avoid light pollution by completely covering greenhouses when artificially lit, if this method of cultivation is to be pursued.

4.6 Special Status Habitat Communities

The two (2) special-status habitat communities identified in the CNDDDB BIOS search in the 7.5-minute USGS Petrolia quadrangle, and the 6 adjacent quadrangles, are the Coastal and Valley Freshwater Marsh habitat and Coastal Douglas Fir Western Hemlock Forest habitat.

The **Coastal and Valley Freshwater Marsh** is only documented to occur within the Petrolia quadrangle south of the Mattole River mouth, approximately 5.00 air miles southwest of the Study Area. The description of a Freshwater Marsh habitat is described to consist of freshwater that develops in shallow, standing or slow-moving water and can be found at the edge of ponds and streams, and at other sites that, lack currents and is permanently flooded by fresh water. This habitat is different than the potential wetland features identified within the Study Area. There was no such habitat observed during the site visit that meets the criteria for a Coastal and Valley Freshwater Marsh and is therefore determined to not exist within the Study Area. The potential project is not anticipated to impact this habitat in anyway.

The **Coastal Douglas Fir Western Hemlock Forest** was also only documented to occur within the Petrolia quadrangle as well, south of the Mattole River, approximately 2.50 miles upriver from the Mattole River mouth and approximately 2.75 air miles southwest of the Study Area. According to the

Society of American Foresters: *Forest Cover Types of the United States and Canada*, this habitats composition is defined by “[c]oast Douglas fir and western hemlock both present in substantial amounts in this mixed-species type, and together comprise at least 80 percent of the stocking. Douglas fir usually is predominant, but hemlock may be so on more moist or less fertile sites.” No western hemlock were observed within the Study Area, and the Douglas fir trees observed do not meet this forest type composition description. Therefore, this habitat type was determined to not exist within the Study Area. The potential project is not anticipated to impact this habitat in anyway.

Section 5 Conclusion

5.1 Potential Impacts and Recommended Mitigation

5.1.1 Potential Direct Impacts

Direct impacts are considered to be effects that may occur to the environment from direct interface with proposed action. The Biological Reconnaissance and Project Feasibility Assessment, in conjunction with the protocol-level Botanical Survey and the initial Raptor Survey, conducted within the Study Area resulted in locations that have been determined to be suitable sites for cannabis cultivation based on the preexisting habitat type and quality, observed species, and the locations setbacks from sensitive habitats. These locations have been established as a means to minimize or negate the potential for direct impact to occur to the environment from direct interface with the project development.

If the project related activities occur at the locations defined in Map 2 - 4, there will likely be no negative impacts to sensitive habitats, or severely alter the already disturbed habitat quality of the site, any more than already has been by historic land utilization. Given the preexisting disturbance to this site, and the fact that no sensitive vegetation is to be removed within and surrounding the Study Area, the effects of the project to the environment can be mitigated and no significant adverse effects to biological resources can be achieved if the actions associated with this project follow the recommendations listed in *Section 5.1.3*.

As a result of the abundance of invasive and nonnative species within the Area Assessed for Project Feasibility, the proposed project is capable of assisting in improving the surrounding environment and habitat by removing these invasive species during the project site development process, and ultimately halting their spread. Because of these factors, the activities associated with the cultivation at the proposed sites would only potentially have direct impacts as disturbance-based

Common disturbance-based impacts associated with cannabis cultivation include noise and light pollution. No continuous noise (above 70 dB to the nearest tree line) or light is to be generated in association with this proposed project. These disturbance-based impacts can be mitigated since the project will utilize PG&E grid power, avoiding the need for noise producing generators, and if the cultivation method proposed requires artificially lighting greenhouses, they shall be completely covered when lit to avoid any potential for light pollution. Therefore, there will be no expected disturbance-based impacts to the surrounding wildlife or habitats.

5.1.2 Potential Indirect Impacts

If best management practices are followed, there are no foreseeable indirect impacts associated with this proposed project to the environment, surrounding habitat, or wildlife.

5.1.3 Recommendations

The following recommendations should be followed and/or taken into consideration through the development of the proposed projects and operations:

- During the development and construction of this project, best management practices (BMPs) should be used to prevent sediment, fuels or contaminants from entering the surrounding terrestrial and aquatic environments/habitats. A complete list of BMPs can be found at Humboldt County: Title III – Land Use and Development - Division 3 - Building Regulations (Ch. 7 § 337-13)¹⁴. The implementation of BMPs will be dependent on the project construction methods. Best Practicable Treatment or Control (BPTC) and BMPs have been listed in Appendix F for the client's reference when proceeding with any land development associated with the project assessed in this Report.
 - BMPs for this project should include the installation of waddles, silt fences, and berms to combat and prevent erosion and to eliminated contaminants and sediment movement towards the nearby watercourses, if major ground disturbances is proposed. Construction equipment fueling and greasing should occur within one location at the project site, at least 200 ft away from the river, watercourse, or wetland habitat. This location should be clear of brush, flat and contain fuel mats in case of accidental spillage. Development should only occur during daylight hours. Every morning, and throughout the day, during construction the equipment should be inspected for hydraulic fluid, oil or fuel leaks. If leaks are detected, they should be repaired immediately and before any further work in completed in order to prevent excess spillage entering the watercourse.
- It is recommended that during the time of project site development, the applicant follow the procedures for eradicating the invasive species which will be identified in the projects associated Invasive Species Control Plan document required under the County of Humboldt *Application Requirements Cannabis 2.0*.
- Migratory bird nesting season occurs between February 1 and August 31. If project construction methods result in a sufficient amount of noise from the use of machinery, it is recommended that this construction occur between September 1 and January 31 in order to avoid disturbance to migratory nesting birds. This is also dependent on the location of project development and the project's proximity to nesting bird habitat, such as the riparian corridors identified within the Study Area. Project development proximity to habitat will is to be determined based upon specific project construction methodology. If construction is proposed to occur within the migratory bird nesting season (February 1 and August 31), it is recommended that a biologist survey for nesting birds within the proximity of the project area within a couple weeks

¹⁴ Best Management Practices for Humboldt Co. can be located at: <https://humboldt.county.codes/Code/337-13>

(approximately 14 days) prior to the project construction and prior to any vegetation removal. This should be done as a measure to investigate if any migratory, or nonmigratory, birds have constructed nests in any of the trees within a proximity to the project that may be impacted by noise disturbance.

- When the cultivation operation is in process, there is to be no cultivation material outside of the project area, and trash within and outside of the project site, will be regularly removed to avoid interfacing with the surrounding habitat, environment and/or wildlife.
- The applicant should survey the site before any ground disturbance for burrows which may indicate American badger presence. If burrows are observed, pre-construction surveys should be completed by a qualified biologist, before site development occurs. Ground disturbance of the project site, with the use of construction equipment, may result in the potential to injure or kill American badgers by crushing them in their dens or crushing den entrances, which would prevent badgers from escaping. The survey should be conducted to determine if the site location contains active dens and determine if avoidance of these active dens can occur. If active dens are determined to be present, badger relocation should occur to other onsite suitable habitat. The client can avoid the need for a pre-construction survey if above ground pots are utilized for cultivation and no ground disturbance will occur.
- If the proposed pond is constructed, a Bullfrog Management Plan, that complies with CDFW requirements, should be implemented.
- Stream crossings were identified within the Study Area, but were not the primary objective of this site inspection/report. The State Water Board General Order for Cannabis Cultivation requires that legacy discharge issues be addressed for projects within the North Coast region. If stream crossings occur within the parcel, the applicant will need to address and upgrade crossings to accommodate anticipated flow levels associated with 100-year storm events. Further biological investigation may be required to comply with the construction associated with stream crossing upgrades.
 - Pre-construction surveys should occur as general measures for protection of biological resources that may utilize the watercourses where the stream crossing upgrades occur.
 - For any work sites containing western pond turtles, salamanders, foothill yellow-legged frogs, California red-legged frogs, tailed frogs, or other special-status species that may be found within the work site, the applicant shall provide to the assigned CDFW officer associated with the projects Lake or Streambed Alteration Agreement for review and approval, a list of the exclusion measures that will be used at their work site to prevent take or injury to any individual pond turtles, salamanders, or frogs that could occur on the site. The applicant shall

ensure that the approved exclusion measures are in place prior to construction. Any turtles or frogs found within the exclusion zone shall be moved to a safe location upstream or downstream of the work site, prior to construction.

- To avoid impacts to aquatic habitats and associated species, the activities carried out during the stream crossing upgrades should occur during the summer dry season where flows are low, or streams are dry.
 - Work around streams is restricted to the period of June 15 through November 1 or the first significant rainfall, whichever comes first. Actual project start and end dates, within this timeframe, are at the discretion of CDFW.
 - All project activities shall be confined to daylight hours.
- Prior to construction, the applicant will obtain permission to conduct the construction work from, but not limited to the following agencies:
 - California Department of Fish and Wildlife, Lake or Streambed Alteration Agreement (LSAA/1600).
 - North Coast Regional Water Quality Control Board, Section 401 Water Quality Certification.
- If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the Humboldt County Cannabis Program EIR, CDFW Survey and Monitoring Protocols and Guidelines, which can be located here:
<https://www.wildlife.ca.gov/conservation/survey-protocols>

5.2 Statement of Limitation

The data and findings presented in this Report are valid to the extent that they represent habitat analysis and/or actual sightings of the wildlife and special-status species described. These findings outlined in this Report are based on one (1) Biological Assessment site visit and refer to findings from two (2) seasonally appropriate Botanical Survey site visits and one (1) Fall Raptor Survey and may not be seasonally appropriate for all conclusive results.

Deficiencies in these findings may result from the following:

- The assessment of habitat utilization within the Study Area, by special-status animal species, was based upon the observations made during a single site visit and further studies and surveys may be required for project approval by local, state or federal agencies as well.

- The parcel boundaries displayed in the maps created for this Report do not represent a boundary survey. Parcel and property lines shown within these maps are approximated and were acquired from Humboldt County Web GIS, and any errors within these boundaries are a result of errors in Humboldt County's GIS database.
- This Report is not intended to be a complete biological survey report for all species generated from the CNDDDB, but rather an initial reconnaissance and feasibility assessment based on present biological conditions. However, the Botanical Survey in Appendix G does intend to be a complete biological survey of floristic species observed within the Area Assessed for Project Feasibility in the 2021 bloom season.
- It has been assumed that prior to implementation of this project, protocol-level surveys (pre-construction) will be conducted to verify field and data-based observations documented in this Report, if recommendations established in this Report are not followed.
- The biological resource buffers and setbacks defined in this Report, and presented in Map 2, only represent buffers to biological resources and do not include cultural resources (e.g. historical landmarks and/or cemeteries). Additional buffers and setbacks may be required for cultural resources which may alter the size of the potential cultivation areas defined in this Report.

The opinions, conclusions, and recommendations in this Report are based on assumptions made by Naiad Biological Consulting when undertaking services and preparing the Report. As a result of this Report being an initial biological reconnaissance and scoping assessment, and not a protocol-level survey, Naiad Biological Consulting expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with any of the assumptions being incorrect.

Section 6 Regulatory Framework

6.1 Regulatory Framework Guidelines

The following regulatory framework is provided as justification for the rules and recommendations presented within this document. Further information may be appropriate for explanation of recommendations or actions expressed in this document and can be presented to the client upon request.

6.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the federal Endangered Species Act (FESA). The USFWS also maintains a list of 'proposed' species and candidate species that are not legally protected under the FESA, but are often included in their review of a project as they may become listed in the near future. The FESA protects listed animal species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands. Pursuant to the requirements of the FESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species (plants and animals) may be present in the project area and determine whether the proposed project may affect such species. Any activities that could result in the take of a federally-listed species will require formal consultation with the USFWS.

6.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) protects any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species (California Fish and Wildlife Code 2070). Take of state-listed species requires a permit from CDFW, which is granted only under strictly limited circumstances. Additionally, the CDFW maintains lists of "species of special concern" that are defined as animal species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project may result in a significant impact on such species.

6.1.3 California Environmental Quality Act

Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Wildlife Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts, if it finds that the species meets the criteria of a threatened or endangered species.

6.1.4 Clean Water Act

Under Section 404 of the federal Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may also be subject to Corps jurisdiction. In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill are sometimes covered by Nationwide Permits, which were established to streamline the permit process for projects with "minimal" impacts on wetlands or other waters of the U.S. An Individual Permit is required for projects that result in more than a minimal impact on jurisdictional areas. The Individual Permit process requires evidence that fill of jurisdictional areas has been minimized to the extent "practicable" and provides an opportunity for public review of the project.

6.1.5 California Water Quality Regulatory Programs

Pursuant to Section 401 of the federal Clean Water Act and the state's Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB sometimes asserts jurisdiction over wetlands that the Corps does not (e.g. certain isolated wetlands) and may impose mitigation requirements even if the Corps does not. The CDFW also exerts jurisdiction over the bed and banks of watercourses and water bodies according to provisions of Section 1601 to 1603 of the Fish and Wildlife Code. The Fish and Wildlife Code requires a Stream Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body.

Section 7 References

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Appendix A

Photo Documentation

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021



Photo 1. The riparian forest habitat along the unnamed Class II water course on APN: 105-101-011. See Map 2 for location reference.



Photo 2. The unnamed Class II watercourse on APN: 105-101-011. Photo taken from the stream looking down stream towards the west facing the bridge.



Photo 3. The unnamed Class II watercourse on APN: 105-101-001. Photo taken from the bridge looking up stream towards the east.



Photo 4. The pasture habitat on APN: 105-101-011. See Map 2 for site location.



Photo 5. A second photo of the pasture habitat on APN: 105-101-011. See Map 2 for site location



Photo 8. The unnamed Class II watercourse in the northwestern portion of APN: 105-101-011. This habitat is not expected to be impacted by the proposed cultivation project in anyway (Map 2).



Photo 7. The culvert and stream crossing over the unnamed Class II watercourse in the northwestern portion of APN: 105-101-011. This may need to be replaced in order to comply with regulation sizing (Map 2).



Photo 8. The thick vegetated area surrounding the Class III watercourse identified on APN:105-101-011 (Map 2).



Photo 9. The pasture habitat on the northwestern portion of APN: 105-101-011 and southwestern portion of APN: 104-232-005 where the proposed project area, within Area Assessed for Project Feasibility, be located. This site was determined to be suitable for cannabis cultivation due to its present habitat quality, observed species, and setbacks to watercourses and sensitive habitats. Photo taken facing southwest. See Map 2 for site location.



Photo 10. The pasture habitat on the northwestern portion of APN: 105-101-011 and southwestern portion of APN: 104-232-005 where the proposed project site occurs. This site was determined to be suitable for cannabis cultivation due to its present habitat quality, observed species, and setbacks to watercourses and sensitive habitats. Photo taken facing northeast from the southwestern portion of the proposed site. See Map 2 for site location.



Photo 11. A burrow from an American badger observed within the grazed pasture habitat in the Area Assessed for Project Feasibility (Map 2).

Appendix B

Tables

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

Table 1 – Special-Status Animal Species – September 2021 – APN: 105 – 101 – 011 & 104 – 232 – 005 – Petrolia and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Habitats	Potential of Occurrence
Amphibians						
<i>Ascaphus truei</i>	Pacific tailed frog	None	None	SSC	Inhabits cold, clear, permanent rocky streams in wet forests. They do not inhabit ponds or lakes. A rocky streambed is necessary for protective cover for adults, eggs, and larvae. After heavy rains, adults may be found in the woods away from the stream.	None in project area. Low in surrounding area
<i>Rana aurora</i>	northern red-legged frog	None	None	SSC	inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs along the Coast Ranges from Del Norte County to Mendocino County, usually below 1200 m (3936 ft).	Low in project area. Moderate in adjacent area.
<i>Rana boylei</i>	foothill yellow-legged frog	None	Candidate Threatened	SSC	found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valleyfoothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	Low in project area. Moderate/high in adjacent area.
<i>Rhyacotriton variegatus</i>	southern torrent salamander	None	None	SSC	This species occurs in cold, well-shaded permanent streams and seepages in shady coastal forests.	None in project area. Low in adjacent area.
<i>Taricha rivularis</i>	red-bellied newt	None	None	SSC	Broadleaved upland forest North coast coniferous forest Redwood Riparian forest Riparian woodland. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	Low in project area. Moderate in adjacent area.
Birds						
<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL	A breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, and other local areas in southern California. Ranges from sea level to above 2700 m (0-9000 ft). Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently.	Moderate in project area (flyover). Moderate in adjacent area.
<i>Accipiter gentilis</i>	northern goshawk	None	None	SSC	Prefers middle and higher elevations, and mature, dense conifer forests. Casual in winter along north coast, throughout foothills, and in northern deserts, where it may be found in pinyon-juniper and low- elevation riparian habitats.	Low in project area (flyover). Moderate in adjacent area.
<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	Ranges from sea level up to 3833 m (0-11,500 ft) (Grinnell and Miller 1944). Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.	Moderate in project area (flyover). Moderate in adjacent area.
<i>Fratercula cirrhata</i>	tufted puffin	None	None	SSC	Tufted Puffins can be found in many coastal habitats adjacent to the Washington coast and elsewhere in the northern Pacific, with the exception of estuaries. They breed in colonies on islands with steep, grassy slopes or on cliff tops. Winter habitat is well offshore, in mid-ocean.	None in project area. Low in adjacent area.

<i>Ardea alba</i>	great egret	None	None	-	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland:Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low in project area. Moderate in adjacent area.
<i>Ardea herodias</i>	great blue heron	None	None	-	The great blue heron is fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills.	Low in project area. Moderate in adjacent area.
<i>Pelecanus occidentalis californicus</i>	California brown pelican	Delisted	Delisted	FP	Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	None.
<i>Phalacrocorax auritus</i>	double-crested cormorant	None	None	WL	A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. August to May, fairly common to locally very common along the coast and in estuaries and salt ponds; uncommon in marine subtidal habitats from San Luis Obispo Co. south, and very rare to the north.	None in project area. Low in adjacent area.
<i>Strix occidentalis caurina</i>	Northern spotted owl	Threatened	Threatened	SSC	Northern spotted owls typically nest or roost in multilayered, mature coniferous forest with high canopy closure, large overstory trees, and broken-topped trees or other nesting platforms (USFWS 2012). Confirmed breeding areas are widespread throughout Humboldt County (Hunter et al. 2005). Northern spotted owls may use a broad range of habitats for foraging. Their favored prey, the dusky-footed woodrat (<i>Neotoma fuscipes</i>), typically inhabits the forest edge (Harris 2005).	None in project area (flyover). Low in adjacent area.
Fish						
<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	SSC	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area.
<i>Oncorhynchus kisutch</i> pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. Low in adjacent area.
<i>Oncorhynchus mykiss irideus</i> pop. 16	steelhead - northern California DPS	Threatened	None	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. Low in adjacent area.
<i>Oncorhynchus mykiss irideus</i> pop. 36	summer-run steelhead trout	None	None	SSC	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. Low in adjacent area.

<i>Oncorhynchus tshawytscha</i> pop. 17	chinook salmon - California coastal ESU	Threatened	None	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. Low in adjacent area.
Insects						
<i>Bombus occidentalis</i>	western bumble bee	None	None	-	nests underground or above ground in abandoned bird nests. food plants include Baccharis, Cirsium, Lupinus, Lotus, Grindella, Phacella	Moderate in project area. Moderate in adjacent area.
Mammals						
<i>Erethizon dorsatum</i>	North American porcupine	None	None	-	broadleaf upland forest, cismontane woodland, lower and upper montane conifer forest	Moderate in project area. Moderate in adjacent area.
<i>Arborimus pomo</i>	Sonoma tree vole	None	None	SSC	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood- conifer habitats.	Low in project area. Moderate in adjacent area.
<i>Pekania pennanti</i>	fisher - West Coast DPS	None	Threatened	SSC	Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure (Schempf and White 1977).	Low in project area. Moderate in adjacent area.
<i>Taxidea taxus</i>	American badger	None	None	SSC	Alkali marsh Alkali playa Alpine Alpine dwarf scrub Bog & fen Brackish marsh Broadleaved upland forest Chaparral Chenopod scrub Cismontane woodland Closed-cone coniferous forest Coastal bluff scrub Coastal dunes Coastal prairie Coastal scrub Desert dunes Desert wash Freshwater marsh Great Basin grassland Great Basin scrub Interior dunes Lone formation Joshua tree woodland Limestone Lower montane coniferous forest Marsh & swamp Meadow & seep Mojavean desert scrub Montane dwarf scrub North coast coniferous forest Oldgrowth Pavement plain Redwood Riparian forest Riparian scrub Riparian woodland Salt marsh Sonoran desert scrub Sonoran thorn woodland Ultramafic Upper montane coniferous forest Upper Sonoran scrub Valley & foothill grassland: Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Present in project area. Moderate in adjacent area.
<i>Eumetopias jubatus</i>	Steller (=northern) sea-lion	Delisted	None	-	Steller sea lions are found in coastal waters of the North Pacific Ocean from Japan to central California.. Breeding occurs along the North Pacific Rim from Año Nuevo Island in central California to the Kuril Islands north of Japan, with the greatest concentration of rookeries (breeding grounds) in the Gulf of Alaska.	None.
Reptile						
<i>Emys marmorata</i>	western pond turtle	None	None	SSC	aquatic, flowing waters, standing waters, marsh, swamp, wetland	Low in project area. Moderate in adjacent area.

Definitions of CDFW statuses:

FP

Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.

SS

Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

WL

Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Definitions of Federal Statuses (Federal Endangered Species Act):

Endangered species:

As defined in the U.S. Government Code and California Fish and Game Code (16 U.S. Government Code 1532[6] and California Fish and Game Code Section 2062), a native species, subspecies, variety of organism, or distinct population segment that is in serious danger of becoming extinct throughout all or a significant portion of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

Threatened species:

Native species, subspecies, variety, or distinct population segment of an organism that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future throughout all of a significant portion of its range.

Candidate Species:

Not defined or addressed in statute or regulations. Candidate species are those which USFWS has sufficient information on their biological status and threats to propose listing, but for which the development of a proposed listing regulation is precluded by other higher priority listing activities. Candidates receive no protection under the ESA.

Definitions of State Statuses (California Endangered Species Act):

Endangered species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Fish & G. Code, §2062

Threatened species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code, §2067

Candidate Species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the Department for listing. Candidates are given full CESA protection. Fish & G. Code, §2068

Table 2 – Special-Status Plant Species – September 2021 – APN: 105 – 101 – 011 & 104 – 232 – 005– Petrolia and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CESA	Bloom Period	Lifeform	Habitat	Micro Habitat	Elevation (m)	Potential of Occurrence
<i>Usnea longissima</i>	Methuselah's beard lichen	None	None	4.2	NA	fruticose lichen (epiphytic)	Broadleaved upland forest; North Coast coniferous forest	On tree branches; usually on old growth hardwoods and conifers.	50 - 1460 meters	None. Moderate in adjacent area.
<i>Erigeron biolettii</i>	streamside daisy	None	None	3	Jun-Oct	perennial herb	Broadleaved upland forest; Cismontane woodland; North Coast coniferous forest	Rocky, mesic	30 - 1100 meters	Low in project area. Moderate in adjacent area.
<i>Hemizonia congesta ssp. tracyi</i>	Tracy's tarplant	None	None	4.3	May-Oct	annual herb	Coastal prairie; Lower montane coniferous forest; North Coast coniferous forest	openings, sometimes serpentinite.	120 - 1200 meters	None due to elevation range.
<i>Hesperevax sparsiflora var. brevifolia</i>	short-leaved evax	None	None	1B.2	Mar-Jun	annual herb	Coastal Strand, Northern Coastal Scrub	dunes, coastal	0 - 215 meters	None.
<i>Layia carnosa</i>	beach layia	Endangered	Endangered	1B.1	Mar-Jul	annual herb	Coastal Strand, Northern Coastal Scrub (sandy)	dunes, coastal	0 - 60 meters	None.
<i>Packera bolanderi var. bolanderi</i>	seacoast ragwort	None	None	2B.2	May-Jul	perennial rhizomatous herb	Coastal scrub; North Coast coniferous forest	Sometimes roadsides.	30 - 650 meters	Low in project area. Moderate in adjacent area.
<i>Erysimum concinnum</i>	bluff wallflower	None	None	1B.2	Feb-Jul	annual / perennial herb	Coastal bluff scrub, coastal dunes, coastal prairie	dunes, coastal	0 - 185 meters	None.
<i>Astragalus pycnostachyus var. pycnostachyus</i>	coastal marsh milk-vetch	None	None	1B.2	(Apr)Jun-Oct	perennial herb	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streambanks)	dunes, coastal	0 - 30 meters	None due to elevation range.
<i>Hosackia gracilis</i>	harlequin lotus	None	None	4.2	Mar-Jul	perennial rhizomatous herb	Broadleaved upland forest; Coastal bluff scrub; Closed-cone coniferous forest; Cismontane woodland; Coastal prairie; Coastal scrub; North Coast coniferous forest; Valley and foothill grassland	Wetlands; Roadsides; Meadows and seeps; Marshes and swamps;	0 - 700 meters	Low in project area. Moderate in adjacent area.

<i>Lathyrus glandulosus</i>	sticky pea	None	None	4.3	Apr-Jun	perennial rhizomatous herb	Cismontane woodland	NA	300 - 800 meters	None due to elevation range.
<i>Ribes roezlii</i> var. <i>amictum</i>	hoary gooseberry	None	None	4.3	Mar-Apr	perennial deciduous shrub	Broadleaved upland forest; Cismontane woodland; Lower montane coniferous forest; Upper montane coniferous forest	NA	120 - 2300 meters	Low in project area. Moderate in surrounding area.
<i>Romanzoffia tracyi</i>	Tracy's romanzoffia	None	None	2B.3	Mar-May	perennial herb	Coastal bluff scrub. Coastal scrub	rocky	15 -30 meters	None due to elevation
<i>Iris longipetala</i>	coast iris	None	None	4.2	Mar-May	perennial rhizomatous herb	Coastal prairie, Lower montane coniferous forest, Meadows and seeps.	Mesic sites, heavy soils	0 - 600 meters	Low in project area due to know occurrences. Low in adjacent area.
<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	None	None	1B.1	Jun	perennial rhizomatous herb	Cismontane woodland (openings), Valley and foothill grassland	Known in CA from only one occurrence near Cape Ridge.	NA	Low in project area. Moderate in adjacent area.
<i>Erythronium oregonum</i>	giant fawn lily	None	None	2B.2	Mar-Jun	perennial bulbiferous herb	Cismontane woodland	sometimes serpentinite, rocky, openings; Meadows and seeps	100 - 1150 meters	None due to elevation range.
<i>Erythronium revolutum</i>	coast fawn lily	None	None	2B.2	Mar-Jul	perennial bulbiferous herb	Broadleaved upland forest; North Coast coniferous forest	Mesic, streambanks; Bogs and fens	0 - 1600 meters	None in project area. Moderate in adjacent area
<i>Lilium rubescens</i>	redwood lily	None	None	4.2	Apr-Aug	perennial bulbiferous herb	Broadleaved upland forest; Chaparral; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	Sometimes serpentinite, sometimes roadsides.	30 - 1910 meters	None in project area. Moderate in adjacent area.
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	None	None	4.2	Apr-Aug	perennial herb	Broadleaved upland forest; Coastal prairie; Coastal scrub; North Coast coniferous forest; Riparian woodland	Often in disturbed areas.	0 - 730 meters	Moderate in project area. Moderate in adjacent area.
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	1B.2	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest	often roadcuts.	15 - 880 meters	Moderate in project area. Moderate in adjacent area.
<i>Pityopus californicus</i>	California pinefoot	None	None	4.2	May-Aug	perennial herb (achlorophyllous)	Broadleaved upland forest; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	mesic.	15 - 2225 meters	Low in project area. Moderate in adjacent area.

<i>Montia howellii</i>	Howell's montia	None	None	2B.2	Mar-May	annual herb	North Coast coniferous forest	Vernally mesic, sometimes roadsides; Meadows and seeps; Vernal pools	0 - 835 meters	Low in project area. Moderate in adjacent area.
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	None	None	4.3	Jul-Sep	perennial herb	Broadleaved upland forest; North Coast coniferous forest	sandy or rocky.	45 - 1800 meters	Low in project area. Moderate in adjacent area.
<i>Oenothera wolfii</i>	Wolf's evening-primrose	None	None	1B.1	May-Oct	perennial herb	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	sandy, usually mesic.	3 - 800 meters	None.
<i>Listera cordata</i>	heart-leaved twayblade	None	None	4.2	Feb-Jul	perennial herb	Lower montane coniferous forest; North Coast coniferous forest	Bogs and fens	5 - 1370 meters	None in project area. Moderate in adjacent area.
<i>Piperia candida</i>	white-flowered rein orchid	None	None	1B.2	May-Sep	perennial herb	Broadleaved upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentinite	30 - 1310 meters	None in project area. Moderate in adjacent area.
<i>Castilleja litoralis</i>	Oregon coast paintbrush	None	None	2B.2	Jun-Jul	perennial herb (hemiparasitic)	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	15 - 100 meters	None due to elevation
<i>Calamagrostis foliosa</i>	leafy reed grass	None	Rare	4.2	May-Sep	perennial herb	Coastal bluff scrub, North Coast coniferous forest	rocky	0 - 1220 meters	Moderate in project area. Low in adjacent area.
<i>Pleuropogon refractus</i>	nodding semaphore grass	None	None	4.2	Apr-Aug	perennial rhizomatous herb	Lower montane coniferous forest; Meadows and seeps; North Coast coniferous forest	mesic; riparian forest	0 - 1600 meters	Low in project area. Moderate in adjacent area.
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	None	None	1B.2	Apr-Aug	annual herb	Coastal bluff scrub; Chaparral (openings); Coastal prairie; Valley and foothill grassland	NA	5 - 1665 meters	Moderate in project area. None in adjacent area.
<i>Gilia millefoliata</i>	dark-eyed gilia	None	None	1B.2	Apr - Jul	annual herb	Coastal Dunes	Sandy	0 - 30 meters	None due to elevation range.
<i>Polemonium cameum</i>	Oregon polemonium	None	None	2B.2	Apr-Sep	perennial herb	Coastal prairie, Coastal scrub, Lower montane coniferous forest	NA	0 - 1830 meters	Low in project area. None in adjacent area.
<i>Chrysosplenium glechomifolium</i>	Pacific golden saxifrage	None	None	4.3	Feb-Jun(Jul)	perennial herb	North Coast coniferous forest, Riparian forest	Streambanks, sometimes seeps, sometimes roadsides.	10 - 455 meters	None in project area. Moderate in adjacent area.

Global Conservation Status Definition

Listed below are definitions for interpreting NatureServe global (range-wide) conservation status ranks. These ranks are assigned by NatureServe scientists or by a designated lead office in the NatureServe network.

G1 Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 Imperiled – At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.

G3 Vulnerable – At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.

G4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 Secure – Common; widespread and abundant.

G#G# Range Rank – A numeric range rank (e.g. G2G3, G1G3) is used to indicate the range of uncertainty about the exact status of a taxon or ecosystem type. Ranges cannot skip more than two ranks (e.g., GU should be used rather than G1G4).

Intraspecific Taxon Conservation Status Ranks

T# Intraspecific Taxon (trinominal) – The status of intraspecific taxa (subspecies or varieties) are indicated by a “T-rank” following the species global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species. For example, a G1T2 subrank should not occur. A vertebrate animal population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an intraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the taxon’s informal taxonomic status.

Subnational (S) Conservation Status Ranks

S1 Critically Imperiled – Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.

S2 Imperiled – Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.

S3 Vulnerable – Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure – Common, widespread, and abundant in the jurisdiction.

S#S# Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Rank Qualifiers

- ? **Inexact Numeric Rank** – Denotes inexact numeric rank; this should not be used with any of the Variant Global Conservation Status
- Q **Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a lower-priority (numerically higher) conservation status rank. The “Q” modifier is only used at a global level and not at a national or subnational level.

Appendix C

Maps

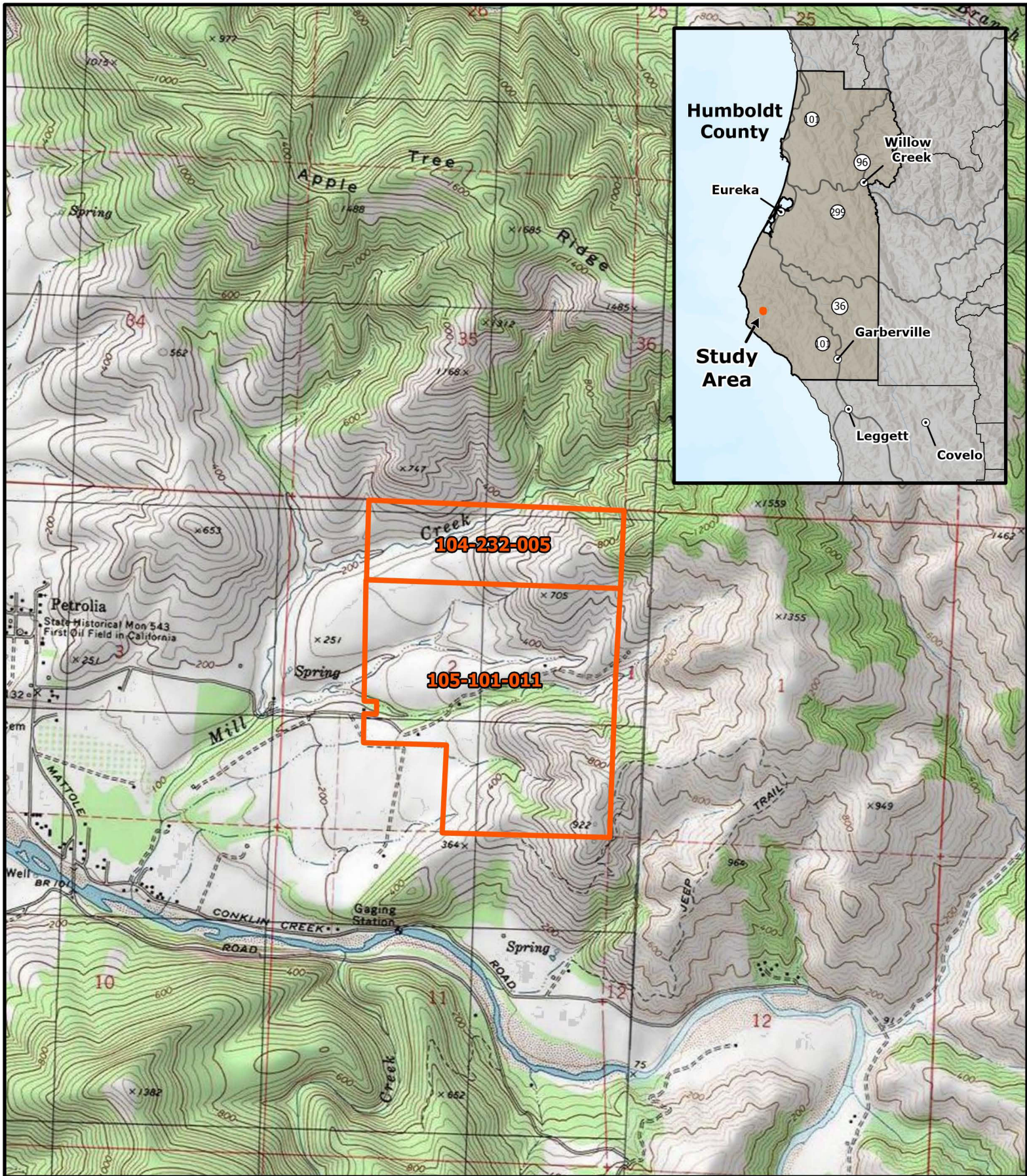
BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

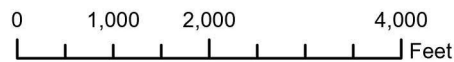


Karl Benemann Construction, LLC
 PO Box 1083 Trinidad, CA 95570
 APNs: 104-232-005 & 105-101-011



Map 1: Site Location Map

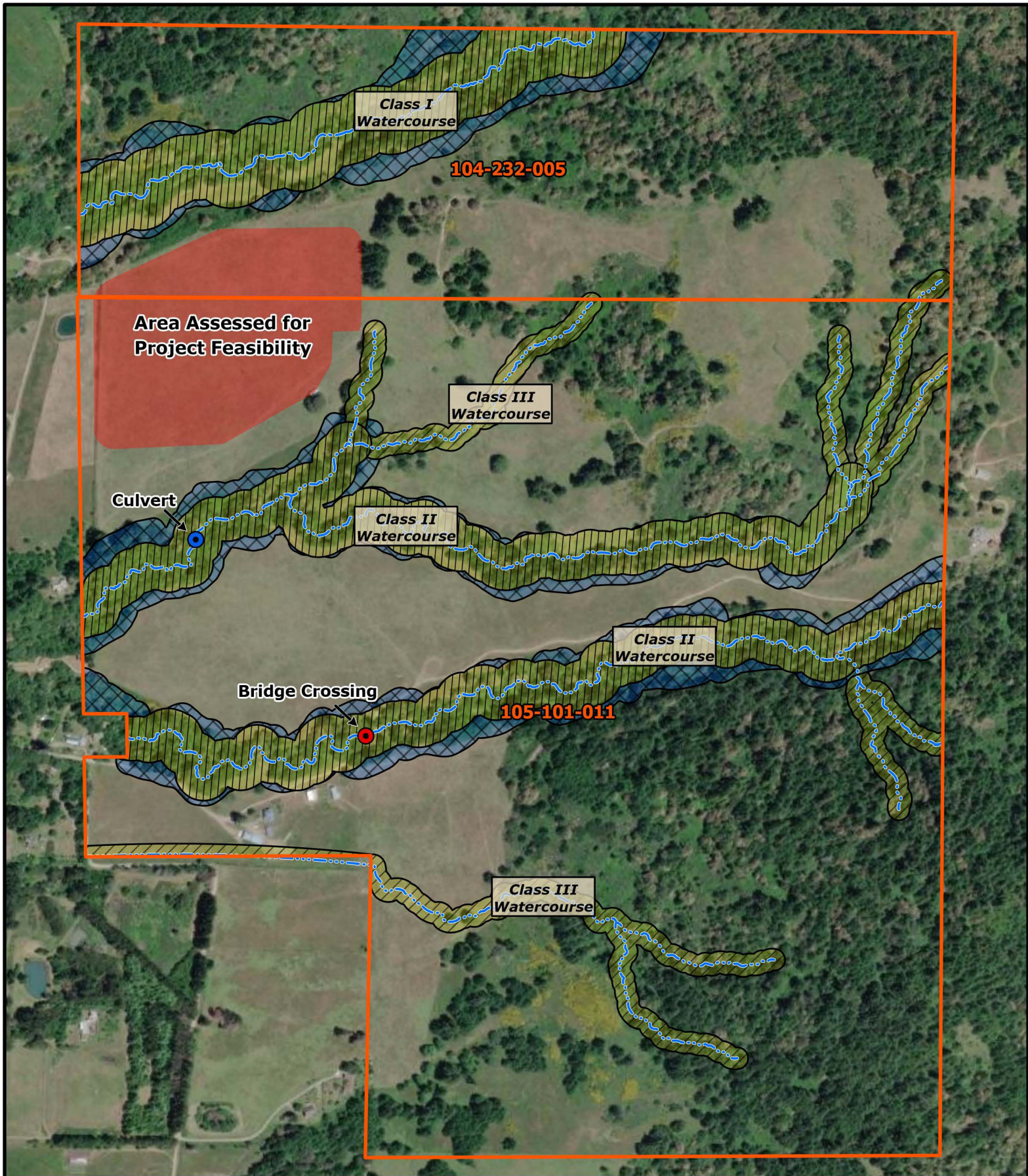
Scale: 1:24,000  Study Area



Source: Petrolia 7.5-Minute USGS Quadrangle

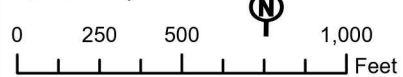
Naiad
 Biological
 Consulting





Map 2: Area Assessed for Project Feasibility

Scale: 1:7,000



Source: Petrolia 7.5-Minute USGS Quadrangle

- Study Area
- Area Assessed for Project Feasibility
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- County Aquatic Resource Buffer
- State Aquatic Resource Buffer
- Bridge
- Culvert





Map 3: Biological Survey Path

Scale: 1:7,639

0 250 500 1,000 Feet

Source: Petrolia 7.5-Minute USGS Quadrangle

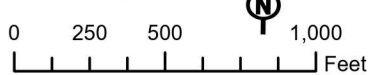
- Study Area
- Area Assessed for Project Feasibility
- Biological Survey Path (7/3/20)
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse

Naiad
Biological Consulting



Map 4: Web Soil Survey and NWI

Scale: 1:7,639



Source: Petrolia 7.5-Minute USGS Quadrangle

Area Assessed for Project Feasibility

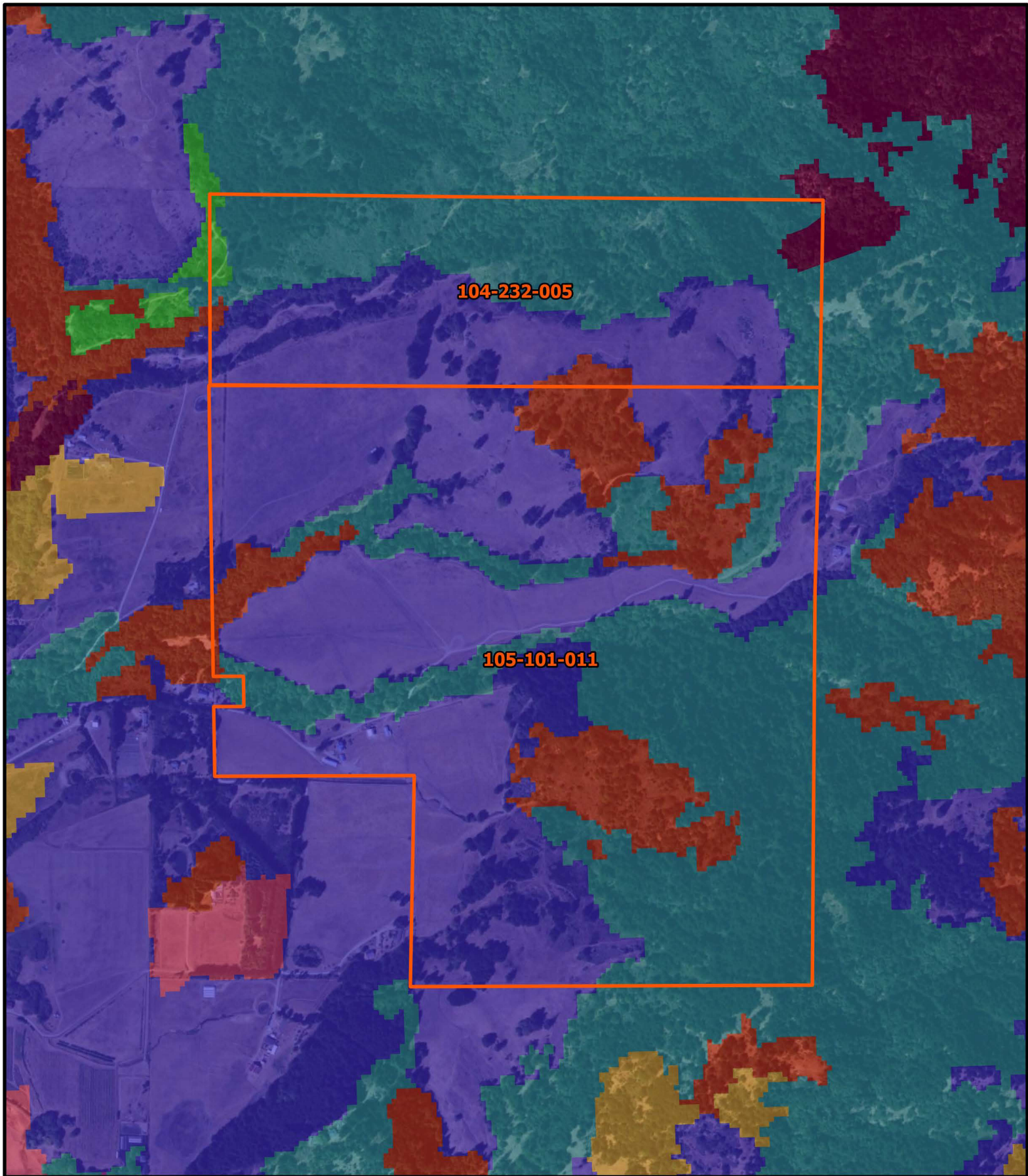
NRCS Web Soil Survey

Soil Map Units Within Study Area

USFS National Wetlands Inventory (NWI)

Riverine





Map 5: CalVeg Alliances

Scale: 1:10,000



0 250 500 1,000
Feet

Source: Petrolia 7.5-Minute USGS Quadrangle

Study Area

Regional Dominant Alliance

Agricultural

Coyote Brush Alliance

Pacific Douglas-Fir Alliance

Annual Grasses and Forbs Alliance

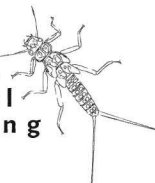
North Coastal Scrub Alliance

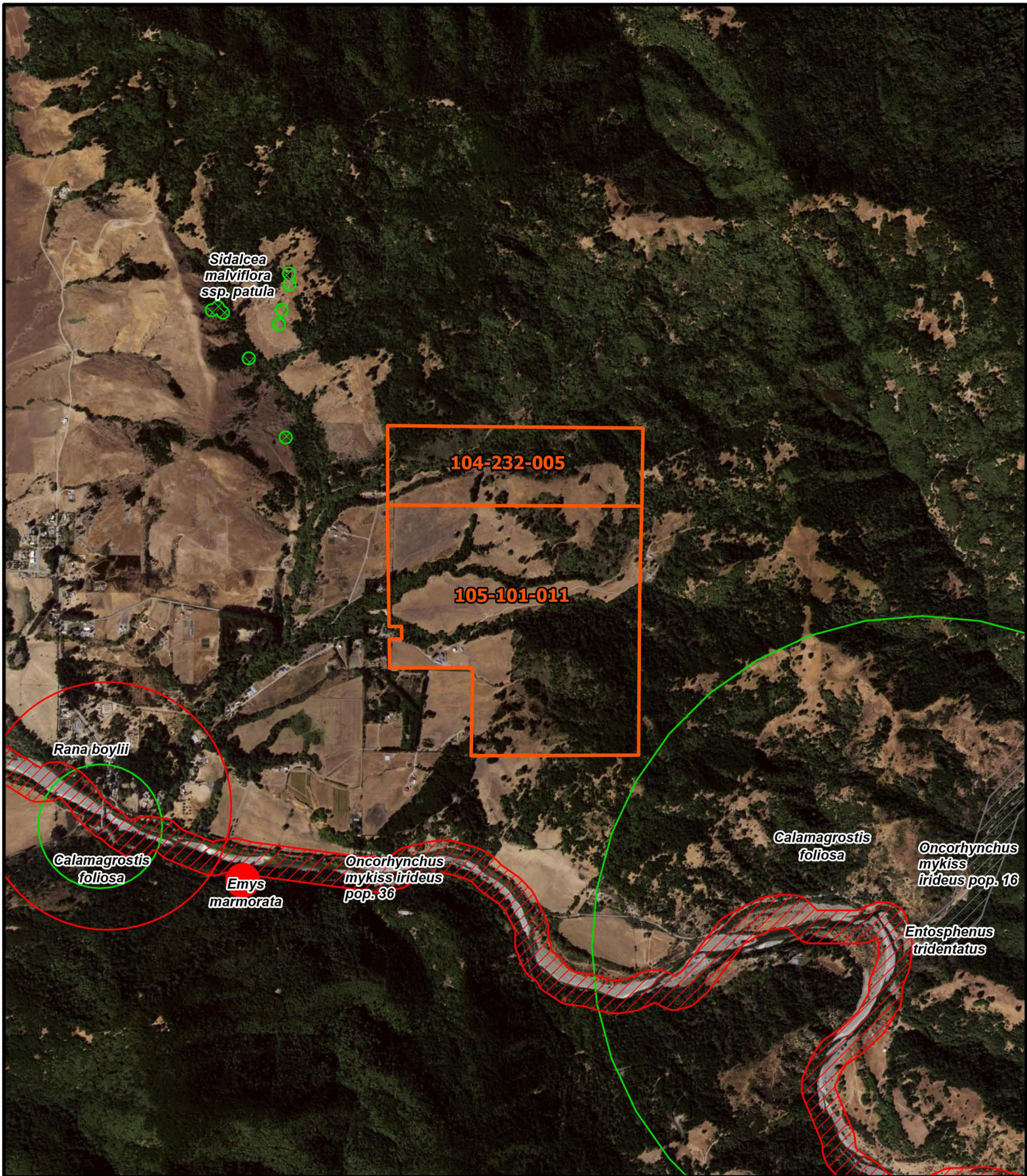
California Bay Alliance

Tanoak (Madrone) Alliance

Black Cottonwood Alliance

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Consulting





Map 6: CNDDB Special Status Species

Scale: 1:24,000



0 500 1,000 2,000
Feet

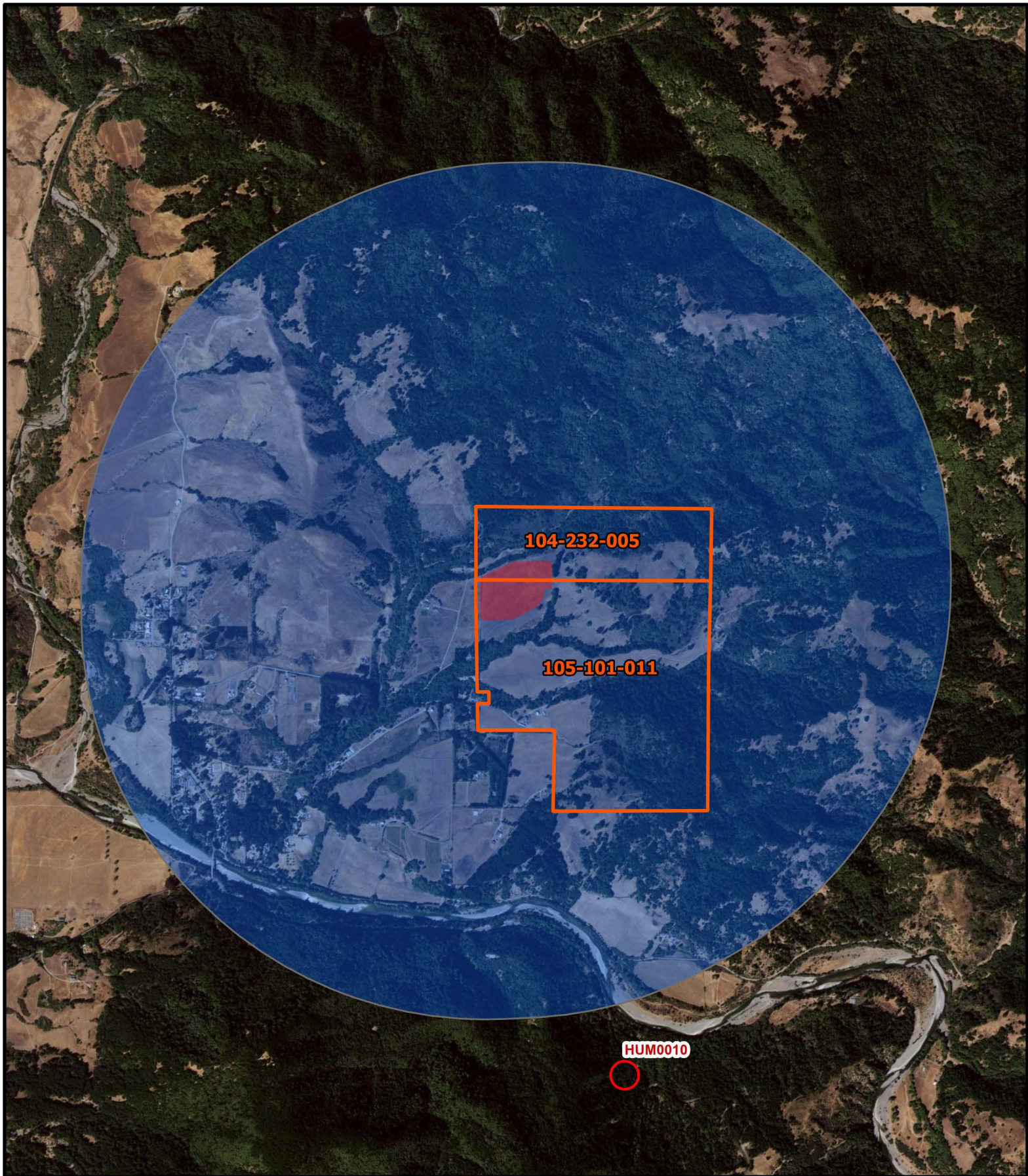
Source: Petrolia 7.5-Minute USGS Quadrangle

Study Area

CNDDB Symbology

- Plant (specific)
- Plant (circular)
- Animal (80m)
- Animal (non-specific)
- Animal (circular)
- Multiple (non-specific)









Map 7: Spotted Owl Observations

Scale: 1:26,000



0 1,000 2,000 4,000
Feet

Source: Petrolia 7.5-Minute USGS Quadrangle

-  Study Area
 -  Area Assessed for Project Feasibility
 -  1.3 Mile Buffer from Area Assessed
- Spotted Owl Observations**
-  Activity Center



Appendix D

Special-Status Species Occurrence Reports

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

Data Version Date:
01/02/2020
Report Generation Date:
1/25/2020



Report #2 - Observations Reported

List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

H_02S_02W Sections(11,14);

<i>Type</i>	<i>Date</i>	<i>Time</i>	<i>#Adults</i>	<i>Age/Sex</i>	<i>Pair</i>	<i>Nest</i>	<i>#Young</i>	<i>Latitude DD NAD83</i>	<i>Longitude DD NAD83</i>	<i>MTRS</i>	<i>Coordinate Source</i>
Masterowl: HUM0010 Subspecies: NORTHERN											
AC	1974-07-10		1	UU				40.304075	-124.257643	H 02S 02W 11	Contributor

Appendix E

NRCS Web Soil Survey Reports

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

Humboldt County, South Part, California

151—Parkland-Garberville complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: v79t

Elevation: 60 to 460 feet

Mean annual precipitation: 49 to 90 inches

Mean annual air temperature: 55 to 59 degrees F

Frost-free period: 240 to 280 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Parkland and similar soils: 45 percent

Garberville and similar soils: 40 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Parkland

Setting

Landform: Alluvial fans, stream terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Parent material: Alluvium derived from mixed sedimentary sources

Typical profile

Ap - 0 to 5 inches: loam

ABt - 5 to 7 inches: loam

Bt1 - 7 to 18 inches: silt loam

Bt2 - 18 to 29 inches: clay loam

Bt3 - 29 to 43 inches: clay loam

Bt4 - 43 to 61 inches: clay loam

Bt5 - 61 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 20 to 39 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Garberville

Setting

Landform: Alluvial fans, stream terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sedimentary sources

Typical profile

Ap - 0 to 12 inches: gravelly loam
A - 12 to 19 inches: gravelly loam
Bt1 - 19 to 28 inches: gravelly clay loam
Bt2 - 28 to 39 inches: gravelly clay loam
Bt3 - 39 to 50 inches: gravelly sandy clay loam
BC - 50 to 59 inches: very gravelly sandy loam
C - 59 to 79 inches: very gravelly sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water
(Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Grannycreek

Percent of map unit: 5 percent
Landform: Stream terraces, alluvial fans
Landform position (two-dimensional): Backslope, footslope,
toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave

Across-slope shape: Linear, concave
Hydric soil rating: Yes

Conklin

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Frenchman

Percent of map unit: 3 percent
Landform: Stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Gschwend

Percent of map unit: 2 percent
Landform: Stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

152—Benbow, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1nbcx
Elevation: 250 to 710 feet
Mean annual precipitation: 49 to 90 inches
Mean annual air temperature: 55 to 59 degrees F
Frost-free period: 240 to 280 days
Farmland classification: Not prime farmland

Map Unit Composition

Benbow and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Benbow

Setting

Landform: Stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 6 inches: very gravelly loam
A1 - 6 to 13 inches: very gravelly loam
A2 - 13 to 27 inches: extremely gravelly loam
A3 - 27 to 34 inches: gravelly loam
A4 - 34 to 41 inches: very gravelly loam
C1 - 41 to 48 inches: extremely gravelly coarse sandy loam
C2 - 48 to 59 inches: very gravelly sandy loam
C3 - 59 to 79 inches: extremely gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Conklin

Percent of map unit: 10 percent
Landform: Stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Garberville

Percent of map unit: 5 percent
Landform: Stream terraces, alluvial fans
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

569—Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes

Map Unit Setting

National map unit symbol: 1lpq6
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Crazycoyote and similar soils: 38 percent
Windynip and similar soils: 32 percent
Caperidge, warm, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crazycoyote

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear, concave, convex
Across-slope shape: Linear
Parent material: Colluvium and/or residuum derived from sandstone and mudstone

Typical profile

Oi - 0 to 2 inches: gravelly slightly decomposed plant material
A - 2 to 6 inches: gravelly loam
Bt1 - 6 to 13 inches: gravelly loam
Bt2 - 13 to 39 inches: gravelly clay loam
Bt3 - 39 to 47 inches: very gravelly clay loam
Bt4 - 47 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Windynip

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical profile

A1 - 0 to 4 inches: loam

A2 - 4 to 10 inches: gravelly clay loam

AB - 10 to 24 inches: gravelly clay loam

Bt1 - 24 to 35 inches: gravelly clay loam

Bt2 - 35 to 51 inches: very gravelly clay loam

Bt3 - 51 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 15 to 50 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Caperidge, Warm

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of mountainflank

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Colluvium derived from sandstone and/or residuum weathered from sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A1 - 1 to 6 inches: very gravelly loam

A2 - 6 to 23 inches: very gravelly loam

Bt - 23 to 35 inches: extremely gravelly loam

CBt - 35 to 55 inches: extremely gravelly sandy loam

C - 55 to 69 inches: extremely cobbly sandy loam

Properties and qualities

Slope: 15 to 50 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Wirefence

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Sproulish

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear, concave, convex

Hydric soil rating: No

Yorknorth, moist

Percent of map unit: 2 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: No

Devilshole

Percent of map unit: 2 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of
mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California

Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

646—Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes

Map Unit Setting

National map unit symbol: 1lpq7
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Wirefence and similar soils: 35 percent
Windynip and similar soils: 30 percent
Devilshole and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wirefence

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum derived from sandstone

Typical profile

A1 - 0 to 11 inches: loam
A2 - 11 to 21 inches: loam
A3 - 21 to 33 inches: gravelly loam
AB - 33 to 46 inches: gravelly loam
Bw - 46 to 63 inches: very gravelly fine sandy loam
C - 63 to 79 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 5 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Windynip

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Mountaintop

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical profile

A1 - 0 to 5 inches: loam

A2 - 5 to 12 inches: clay loam

A3 - 12 to 20 inches: clay loam

AB - 20 to 33 inches: clay loam

Bt1 - 33 to 59 inches: gravelly clay loam

Bt2 - 59 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 5 to 30 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Devilshole

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Residuum weathered from sandstone and/or mudstone

Typical profile

A - 0 to 4 inches: gravelly loam

ABt - 4 to 16 inches: very gravelly loam

Bt - 16 to 28 inches: very gravelly loam

BCt - 28 to 47 inches: extremely gravelly loam

C - 47 to 61 inches: gravel

Properties and qualities

Slope: 5 to 30 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: 39 to 59 inches to strongly contrasting textural stratification

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Yorknorth, moist

Percent of map unit: 6 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: No

Crazycoyote

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of mountainflank

Down-slope shape: Linear, concave, convex

Across-slope shape: Linear

Hydric soil rating: No

Rainbear

Percent of map unit: 4 percent

Landform: Mountain slopes, ridges

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California

Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

649—Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: 1lpq9
Elevation: 200 to 3,280 feet
Mean annual precipitation: 49 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 280 days
Farmland classification: Not prime farmland

Map Unit Composition

Windynip and similar soils: 45 percent
Wirefence and similar soils: 25 percent
Devilshole and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windynip

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical profile

A1 - 0 to 8 inches: loam
A2 - 8 to 16 inches: loam
A3 - 16 to 24 inches: loam
Bt1 - 24 to 45 inches: clay loam
Bt2 - 45 to 63 inches: clay loam
C - 63 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Wirefence

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium and residuum derived from sandstone

Typical profile

A1 - 0 to 4 inches: loam

A2 - 4 to 13 inches: loam

A3 - 13 to 25 inches: loam

AB - 25 to 36 inches: gravelly loam

Bw - 36 to 47 inches: gravelly loam

BC - 47 to 79 inches: paragravelly loam

Properties and qualities

Slope: 30 to 50 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Devilshole

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Upper third of mountainflank

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex
Parent material: Residuum weathered from sandstone and/or mudstone

Typical profile

A - 0 to 4 inches: gravelly loam
Bt1 - 4 to 14 inches: very gravelly clay loam
Bt2 - 14 to 29 inches: very gravelly clay loam
CBt - 29 to 46 inches: extremely gravelly loam
C - 46 to 61 inches: gravel
R - 61 to 79 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 0.5 percent
Depth to restrictive feature: 39 to 59 inches to strongly contrasting textural stratification; 49 to 73 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Crazycoyote

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear, concave, convex
Across-slope shape: Linear
Hydric soil rating: No

Coyoterock

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Hydric soil rating: No

Yorknorth, moist

Percent of map unit: 4 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of
mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California

Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

663—Yorknorth-Windynip complex, 15 to 50 percent slopes

Map Unit Setting

National map unit symbol: 1lpqb
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 90 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 280 days
Farmland classification: Not prime farmland

Map Unit Composition

Yorknorth, moist, and similar soils: 70 percent
Windynip and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yorknorth, Moist

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Colluvium derived from sandstone and/or earthflow deposits derived from schist

Typical profile

A - 0 to 10 inches: silt loam
BAt - 10 to 26 inches: silty clay loam
Bt1 - 26 to 35 inches: silty clay loam
Bt2 - 35 to 51 inches: silty clay loam
BCt - 51 to 71 inches: clay loam

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Windynip

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical profile

A1 - 0 to 4 inches: loam

A2 - 4 to 20 inches: loam

Bt1 - 20 to 30 inches: gravelly clay loam

Bt2 - 30 to 43 inches: gravelly clay loam

BCt - 43 to 79 inches: paragravelly clay loam

Properties and qualities

Slope: 15 to 50 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Coyoterock

Percent of map unit: 8 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of mountainflank

Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Hydric soil rating: No

Crazycoyote

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear, concave, convex
Across-slope shape: Linear
Hydric soil rating: No

Devilshole

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

5505—Crazycoyote-Sproulish-Canoeecreek complex, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: 2mhhg
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Crazycoyote and similar soils: 35 percent
Sproulish and similar soils: 30 percent
Canoeecreek and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crazycoyote

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear
Parent material: Colluvium derived from sandstone and/or residuum weathered from sandstone

Typical profile

Oi - 0 to 2 inches: gravelly slightly decomposed plant material
A1 - 2 to 5 inches: gravelly loam
A2 - 5 to 15 inches: gravelly loam
Bt1 - 15 to 25 inches: gravelly loam
Bt2 - 25 to 35 inches: very paragravelly loam
BCt - 35 to 52 inches: very paragravelly loam
C - 52 to 79 inches: paragravelly sandy loam

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Sproulsh

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium derived from mudstone and/or sandstone and/or residuum weathered from mudstone and/or sandstone

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A - 2 to 4 inches: loam

Bt1 - 4 to 24 inches: loam

Bt2 - 24 to 39 inches: gravelly clay loam

Bt3 - 39 to 55 inches: very gravelly clay loam

BcCt - 55 to 79 inches: gravelly clay loam

Properties and qualities

Slope: 30 to 50 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Canoe creek

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountain flank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium derived from mudstone and/or sandstone and/or residuum weathered from mudstone and/or sandstone

Typical profile

O_i - 0 to 2 inches: gravelly slightly decomposed plant material
A - 2 to 12 inches: very gravelly loam
B_w - 12 to 24 inches: very gravelly loam
C₁ - 24 to 35 inches: very gravelly loam
C₂ - 35 to 71 inches: extremely gravelly loam

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (K_{sat}): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Windynip

Percent of map unit: 7 percent
Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountain flank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Kingrange

Percent of map unit: 6 percent

Landform: Mountain slopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of
mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

5506—Crazycoyote-Sproulish-Canoeecreek complex, 50 to 75 percent slopes

Map Unit Setting

National map unit symbol: 2mhhk
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Crazycoyote and similar soils: 35 percent
Sproulish and similar soils: 30 percent
Canoeecreek and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crazycoyote

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear
Parent material: Colluvium derived from sandstone and/or residuum weathered from sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: loam
ABt - 3 to 11 inches: loam
Bt1 - 11 to 24 inches: loam
Bt2 - 24 to 42 inches: loam
Bt3 - 42 to 79 inches: loam

Properties and qualities

Slope: 50 to 75 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Sproulish

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium derived from mudstone and/or sandstone and/or residuum weathered from mudstone and/or sandstone

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A - 2 to 7 inches: gravelly loam

Bt1 - 7 to 11 inches: gravelly loam

Bt2 - 11 to 22 inches: gravelly loam

Bt3 - 22 to 35 inches: gravelly sandy clay loam

Bt4 - 35 to 59 inches: very gravelly sandy clay loam

BcT - 59 to 71 inches: very gravelly loam

Properties and qualities

Slope: 50 to 75 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Canoeecreek

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium derived from mudstone and/or sandstone and/or residuum weathered from mudstone and/or sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 9 inches: gravelly sandy loam
ABw - 9 to 21 inches: very gravelly sandy loam
Bw1 - 21 to 41 inches: very gravelly sandy loam
Bw2 - 41 to 51 inches: very gravelly sandy loam
BCw - 51 to 71 inches: very gravelly sandy loam

Properties and qualities

Slope: 50 to 75 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Windynip

Percent of map unit: 6 percent
Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Kingrange

Percent of map unit: 6 percent

Landform: Mountain slopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Rock outcrop

Percent of map unit: 3 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Center third of
mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California

Survey Area Data: Version 9, Jun 1, 2020

Appendix F

Best Practicable Treatment or Control (BPTC)
and Best Management Practices (BMP)

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

Cannabis Cultivation

Best Practicable Treatment or Control (BPTC) and Best Management Practices (BMP)

Adapted from

State Water Resources Control Board Cannabis General Order WQ 2017-0023-DWQ Attachment A

BPTCs and BMPs are designed to prevent, minimize, and control the discharge of waste and pollutants associated with site operations and maintenance for the aforementioned project. Many of these BMPs are considered enforceable conditions under State Water Resources Control Board *Cannabis* General Order No. WQ 2017-0023-DWQ.

No.	TERM
Land Development and Maintenance, Erosion Control, and Drainage Features	
Limitations on Earthmoving	
1.	Landowners shall not conduct grading activities for land development or alteration on slopes exceeding 50 percent grade, or as restricted by local county or city permits, ordinances, or regulations for grading, or agriculture; whichever is more stringent shall apply. The grading prohibition on slopes exceeding 50 percent does not apply to site mitigation or remediation if the landowner is issued separate WDRs or an enforcement order for the activity by the Regional Water Board Executive Officer.
2.	Finished cut and fill slopes, including side slopes between terraces, shall not exceed slopes of 50 percent and should conform to the natural pre-grade slope whenever possible.
3.	Landowners shall not drive or operate vehicles or equipment within the riparian setbacks or within waters of the state unless authorized under 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board. This requirement does not prohibit driving on established, maintained access roads that are in compliance with this various agency standards.
4.	Land development and access road construction shall be designed by qualified professionals. Landowners shall conduct all construction or land development activities to minimize grading, soil disturbance, and disturbance to aquatic and terrestrial habitat.
5.	The landowner shall control all dust related to operation activities to ensure dust does not produce sediment-laden runoff. The landowner shall implement dust control measures, including, but not limited to, pre-watering of excavation or grading sites, use of water trucks, track-out prevention, washing down vehicles or equipment before leaving a site, and prohibiting land disturbance activities when instantaneous wind speeds (gusts) exceed 25 miles per hour. Landowners shall grade access roads in dry weather while moisture is still present in soil to minimize dust and to achieve design soil compaction, or when needed use a water truck to control dust and soil moisture.
Construction Equipment Use and Limitations	
6.	Landowners shall employ spill control and containment practices to prevent the discharge of fuels, oils, solvents and other chemicals to soils and waters of the state.

7.	<p>Landowners shall stage and store equipment, materials, fuels, lubricants, solvents, or hazardous or toxic materials in locations that minimize the potential for discharge to waters of the state. At a minimum, the following measures shall be implemented:</p> <ol style="list-style-type: none"> 1. Designate an area outside the riparian setback for equipment storage, short-term maintenance, and refueling. Landowner shall not conduct any maintenance activity or refuel equipment in any location where the petroleum products or other pollutants may enter waters of the state as per Fish and Game Code section 5650 (a)(1). 2. Frequently inspect equipment and vehicles for leaks. 3. Immediately clean up leaks, drips, and spills. Except for emergency repairs that are necessary for safe transport of equipment or vehicles to an appropriate repair facility, equipment or vehicle repairs, maintenance, and washing onsite is prohibited. 4. If emergency repairs generate waste fluids, ensure they are contained and properly disposed or recycled off-site. 5. Properly dispose of all construction debris off-site. 6. Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. Sweep up, contain, and properly dispose of spilled dry materials.
Erosion Control	
8.	<p>The landowner shall use appropriate erosion control measures to minimize erosion of disturbed areas, potting soil, or bulk soil amendments to prevent discharges of waste. Fill soil shall not be placed where it may discharge into surface water. If used, weed-free straw mulch shall be applied at a rate of two tons per acre of exposed soils and, if warranted by site conditions, shall be secured to the ground.</p>
9.	<p>The landowner shall not plant or seed noxious weeds. Prohibited plant species include those identified in the California Invasive Pest Plant Council's database, available at: www.cal-ipc.org/paf/. Locally native, non-invasive, and non-persistent grass species may be used for temporary erosion control benefits to stabilize disturbed land and prevent exposure of disturbed land to rainfall.</p>
10.	<p>Landowners shall incorporate erosion control and sediment detention devices and materials into the design, work schedule, and implementation of the project activities. The erosion prevention and sediment capture measures shall be effective in protecting water quality.</p> <ul style="list-style-type: none"> • Interim erosion prevention and sediment capture measures shall be implemented within seven days of completion of grading and land disturbance activities, and shall consist of erosion prevention measures and sediment capture measures including: <ul style="list-style-type: none"> ○ Erosion prevention measures are required for any earthwork that uses heavy equipment (e.g., bulldozer, compactor, excavator, etc.). Erosion prevention measures may include surface contouring, slope roughening, and upslope storm water diversion. Other types of erosion prevention measures may include mulching, hydroseeding, tarp placement, revegetation, and rock slope protection. ○ Sediment capture measures include the implementation of measures such as gravel bag berms, fiber rolls, straw bale barriers, properly installed silt fences, and sediment settling basins. • Long-term erosion prevention and sediment capture measures shall be implemented as soon as possible and prior to the onset of fall and winter precipitation. Long-term measures may include the use of heavy equipment to reconfigure access roads or improve access road drainage, installation of properly-sized culverts, gravel placement on steeper grades, and stabilization of previously disturbed land. • Maintenance of all erosion protection and sediment capture measures is required year round. Early monitoring allows for identification of problem areas or underperforming erosion or sediment control measures. Verification of the effectiveness of all erosion prevention and sediment capture measures is required as part of winterization activities.
11.	<p>Landowners shall only use geotextiles, fiber rolls, and other erosion control measures made of loose-weave mesh (e.g., jute, coconut (coir) fiber, or from other products without welded weaves). To minimize the risk of ensnaring and strangling wildlife, Landowners shall not use synthetic (e.g., plastic or nylon) monofilament netting materials for erosion control for any project activities. This prohibition includes photo- or bio-degradable plastic netting.</p>

12.	Cultivation sites constructed on or near slopes with a slope greater than or equal to 30 percent shall be inspected for indications of instability. Indications of instability include the occurrence of slope failures at nearby similar sites, weak soil layers, geologic bedding parallel to slope surface, hillside creep (trees, fence posts, etc. leaning downslope), tension cracks in the slope surface, bulging soil at the base of the slope, and groundwater discharge from the slope. If indicators of instability are present, the landowner shall consult with a qualified professional to design measures to stabilize the slope to prevent sediment discharge to surface waters.
13.	For areas outside of riparian setbacks or for upland areas, Landowners shall ensure that rock placed for slope protection is the minimum amount necessary and is part of a design that provides for native plant revegetation. If retaining walls or other structures are required to provide slope stability, they shall be designed by a qualified professional.
14.	Landowners shall monitor erosion control measures during and after each storm event that produces at least 0.5 in/day or 1.0 inch/7 days of precipitation, and repair or replace, as needed, ineffective erosion control measures immediately.
Access Road/Land Development and Drainage	
15.	Access roads shall be constructed consistent with the requirements of California Code of Regulations Title 14, Chapter 4. The Road Handbook describes how to implement the regulations and is available at < http://www.pacificwatershed.com/PWA-publications-library >. Existing access roads shall be upgraded to comply with the Road Handbook.
16.	Landowners shall obtain all required permits and approvals prior to the construction of any access road constructed for project activities. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), CDFW LSA Agreement, and county or local agency permits.
17.	Landowners shall ensure that all access roads are hydrologically disconnected to receiving waters to the extent possible by installing disconnecting drainage features, increasing the frequency of (inside) ditch drain relief as needed, constructing out-sloped roads, constructing energy dissipating structures, avoiding concentrating flows in unstable areas, and performing inspection and maintenance as needed to optimize the access road performance.
18.	New access road alignments should be constructed with grades (slopes) of 3- to 8- percent, or less, wherever possible. Forest access roads should generally be kept below 12-percent except for short pitches of 500 feet or less where road slopes may go up to 20- percent. These steeper access road slopes should be paved or rock surfaced and equipped with adequate drainage. Existing access roads that do not comply with these limits shall be inspected by a qualified professional to determine if improvements are needed.
19.	Landowners shall decommission or relocate existing roads away from riparian setbacks whenever possible. Roads that are proposed for decommissioning shall be abandoned and left in a condition that provides for long-term, maintenance-free function of drainage and erosion controls. Abandoned roads shall be blocked to prevent unauthorized vehicle traffic.
20.	If site conditions prohibit drainage structures (including rolling dips and ditch-relief culverts) at adequate intervals to avoid erosion, the landowner shall use bioengineering techniques ¹² as the preferred measure to minimize erosion (e.g., live fascines). If bioengineering cannot be used, then engineering fixes such as armoring (e.g., rock of adequate size and depth to remain in place under traffic and flow conditions) and velocity dissipaters (e.g., gravel-filled "pillows" in an inside ditch to trap sediment) may be used for problem sites. The maximum distance between water breaks shall not exceed those defined in the Road Handbook.
21.	Landowners shall have a qualified professional design the optimal access road alignment, surfacing, drainage, maintenance requirements, and spoils handling procedures.
22.	Landowners shall ensure that access road surfacing, especially within a segment leading to a waterbody, is sufficient to minimize sediment delivery to the wetland or waterbody and maximize access road integrity. Road surfacing may include pavement, chip-seal, lignin, rock, or other material appropriate for timing and nature of use. All access roads that will be used for winter or wet weather hauling/traffic shall be surfaced. Steeper access road grades require higher quality rock (e.g., crushed angular versus river-run) to remain in place. The use of asphalt grindings is prohibited.
23.	Landowners shall install erosion control measures on all access road approaches to surface water diversion sites to reduce the generation and transport of sediment to streams.

24.	Landowners shall ensure that access roads are out-sloped whenever possible to promote even drainage of the access road surface, prevent the concentration of storm water flow within an inboard or inside ditch, and to minimize disruption of the natural sheet flow pattern off a hill slope to a stream.
25.	If unable to eliminate inboard or inside ditches, the landowner shall ensure adequate ditch relief culverts to prevent down-cutting of the ditch and to reduce water runoff concentration, velocity, and erosion. Ditches shall be designed and maintained as recommended by a qualified professional. To avoid point-source discharges, inboard ditches and ditch relief culverts shall be discharged onto vegetated or armored slopes that are designed to dissipate and prevent runoff channelization. Inboard ditches and ditch relief culverts shall be designed to ensure discharges into natural stream channels or watercourses are prevented.
26.	Landowners shall ensure that access roads are not allowed to develop or show evidence of significant surface rutting or gullying. Landowners shall use water bars and rolling dips as designed by a qualified professional to minimize access road surface erosion and dissipate runoff.
27.	Landowners shall only grade ditches when necessary to prevent erosion of the ditch, undermining of the banks, or exposure of the toe of the cut slope to erosion. Landowners shall not remove more vegetation than necessary to keep water moving, as vegetation prevents scour and filters out sediment.
28.	Access road storm water drainage structures shall not discharge onto unstable slopes, earthen fills, or directly to a waterbody. Drainage structures shall discharge onto stable areas with straw bales, slash, vegetation, and/or rock riprap.
29.	Sediment control devices (e.g., check dams, sand/gravel bag barriers, etc.) shall be used when it is not practical to disperse storm water before discharge to a waterbody. Where potential discharge to a wetland or waterbody exists (e.g., within 200 feet of a waterbody) access road surface drainage shall be filtered through vegetation, slash, other appropriate material, or settled into a depression with an outlet with adequate drainage. Sediment basins shall be engineered and properly sized to allow sediment settling, spillway stability, and maintenance activities.
Drainage Culverts (See also Watercourse Crossings)	
30.	Landowners shall regularly inspect ditch-relief culverts and clear them of any debris or sediment. To reduce ditch-relief culvert plugging by debris, Landowners shall use 15- to 24-inch diameter pipes, at minimum. In forested areas with a potential for woody debris, a minimum 18-inch diameter pipe shall be used to reduce clogging. Ditch relief culverts shall be designed by a qualified professional based on site-specific conditions.
31.	Landowners shall ensure that all permanent watercourse crossings that are constructed or reconstructed are capable of accommodating the estimated 100-year flood flow, including debris and sediment loads. Watercourse crossings shall be designed and sized by a qualified professional.
Cleanup, Restoration, and Mitigation	
32.	Landowners shall limit disturbance to existing grades and vegetation to the actual site of the cleanup or remediation and any necessary access routes.
33.	Landowners shall avoid damage to native riparian vegetation. All exposed or disturbed land and access points within the stream and riparian setback with damaged vegetation shall be restored with regional native vegetation of similar native species. Riparian trees over four inches diameter at breast height shall be replaced by similar native species at a ratio of three to one (3:1). Restored areas must be mulched, using at least 2 to 4 inches of weed-free, clean straw or similar biodegradable mulch over the seeded area. Mulching shall be completed within 30 days after land disturbance activities in the areas cease. Revegetation planting shall occur at a seasonally appropriate time until vegetation is restored to pre-operation or pre-Legacy condition or better. Landowners shall stabilize and restore any temporary work areas with native vegetation to pre-operation or pre-Legacy conditions or better. Vegetation shall be planted at an adequate density and variety to control surface erosion and re-generate a diverse composition of regional native vegetation of similar native species.
34.	Landowners shall avoid damage to oak woodlands. Landowner shall plant three oak trees for every one oak tree damaged or removed. Trees may be planted in groves in order to maximize wildlife benefits and shall be native to the local county.

35.	<p>Landowners shall develop a revegetation plan for:</p> <ul style="list-style-type: none"> • All exposed or disturbed riparian vegetation areas, • any oak trees that are damaged or removed, and • temporary work areas. <p>Landowners shall develop a monitoring plan that evaluates the revegetation plan for five years. Landowners shall maintain annual inspections for the purpose of assessing an 85 percent survival and growth of revegetated areas within a five-year period. The presence of exposed soil shall be documented for three years following revegetation work. If the revegetation results in less than an 85 percent success rate, the unsuccessful vegetation areas shall be replanted. Landowners shall identify the location and extent of exposed soil associated with the site; pre- and post-revegetation work photos; diagram of all areas revegetated, the planting methods, and plants used; and an assessment of the success of the revegetation program. Landowners shall maintain a copy of the revegetation plan and monitoring results onsite and make them available, upon request, to Water Boards staff or authorized representatives. An electronic copy of monitoring results is acceptable in Portable Document Format (PDF).</p>
36.	<p>Landowners shall revegetate soil exposed as a result of project activities with native vegetation by live planting, seed casting, or hydroseeding within seven days of exposure.</p>
37.	<p>Landowners shall prevent the spread or introduction of exotic plant species to the maximum extent possible by cleaning equipment before delivery to the Site and before removal, restoring land disturbance with appropriate native species, and post-project activities monitoring and control of exotic species.</p>

Stream Crossing Installation and Maintenance

Limitations on Work in Watercourses and Permanently Poned Areas

38.	<p>Landowners shall obtain all applicable permits and approvals prior to doing any work in or around waterbodies or within the riparian setbacks. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), and a CDFW LSA Agreement.</p>
39.	<p>Landowners shall avoid or minimize temporary stream crossings. When necessary, temporary stream crossings shall be located in areas where erosion potential and damage to the existing habitat is low. Landowners shall avoid areas where runoff from access roadway side slopes and natural hillsides will drain and flow into the temporary crossing. Temporary stream crossings that impede fish passage are strictly prohibited on permanent or seasonal fish-bearing streams.</p>
40.	<p>Landowners shall avoid or minimize use of heavy equipment¹³ in a watercourse. If use is unavoidable, heavy equipment may only travel or work in a waterbody with a rocky or cobbled channel. Wood, rubber, or clean native rock temporary work pads shall be used on the channel bottom prior to use of heavy equipment to protect channel bed and preserve channel morphology. Temporary work pads and other channel protection shall be removed as soon as possible once the use of heavy equipment is complete.</p>
41.	<p>Landowners shall avoid or minimize work in or near a stream, creek, river, lake, pond, or other waterbody. If work in a waterbody cannot be avoided, activities and associated workspace shall be isolated from flowing water by directing the water around the work site. If water is present, then the landowner shall develop a site-specific plan prepared by a qualified professional. The plan shall consider partial or full stream diversion and dewatering. The plan shall consider the use of coffer dams upstream and downstream of the work site and the diversion of all flow from upstream of the upstream dam to downstream of the downstream dam, through a suitably sized pipe with intake screens that protect and prevent impacts to fish and wildlife. Project activities and associated work shall be performed outside the waterbody from the top of the bank to the maximum extent possible.</p>

Temporary Watercourse Diversion and Dewatering: All Live Watercourses

42.	<p>Landowners shall ensure that coffer dams are constructed prior to commencing work and as close as practicable upstream and downstream of the work area. Cofferdam construction using offsite materials, such as clean gravel bags or inflatable dams, is preferred. Thick plastic may be used to minimize leakage but shall be completely removed and properly disposed of upon work completion. If the coffer dams or stream diversion fail, the landowner shall repair them immediately.</p>
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43.	When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, the landowner shall allow sufficient water at all times to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code section 5937.
44.	If possible, gravity flow is the preferred method of water diversion. If a pump is used, the landowner shall ensure that the pump is operated at the rate of flow that passes through the site. Pumping rates shall not dewater or impound water on the upstream side of the coffer dam. When diversion pipe is used it shall be protected from project activities and maintained to prevent debris blockage.
45.	Landowners shall only divert water such that water does not scour the channel bed or banks at the downstream end. Landowner shall divert flow in a manner that prevents turbidity, siltation, and pollution and provides flows to downstream reaches. Landowners shall provide flows to downstream reaches during all times that the natural flow would have supported aquatic life. Flows shall be of sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Block netting and intake screens shall be sized to protect and prevent impacts to fish and wildlife.
46.	Once water has been diverted around the work area, Landowners may dewater the site to provide an adequately dry work area. Any muddy or otherwise contaminated water shall be pumped to a settling tank, dewatering filter bag, or upland area, or to another location approved by CDFW or the appropriate Regional Water Board Executive Officer prior to re-entering the watercourse.
47.	Upon completion of work, Landowners shall immediately remove the flow diversion structure in a manner that allows flow to resume with a minimum of disturbance to the channel substrate and that minimizes the generation of turbidity.
Watercourse Crossings	
48.	Landowners shall ensure that watercourse crossings are designed by a qualified professional.
49.	Landowners shall ensure that all access road watercourse crossing structures allow for the unrestricted passage of water and shall be designed to accommodate the estimated 100-year flood flow and associated debris (based upon an assessment of the streams potential to generate debris during high flow events). Consult CAL FIRE 100-year Watercourse Crossings document for examples and design calculations, available at: http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20(final-a).pdf .
50.	Landowners shall ensure that watercourse crossings allow migration of aquatic life during all life stages supported or potentially supported by that stream reach. Design measures shall be incorporated to ensure water depth and velocity does not inhibit migration of aquatic life. Any access road crossing structure on watercourses that supports fish shall be constructed for the unrestricted passage of fish at all life stages, and should use the following design guidelines: <ul style="list-style-type: none"> • CDFW's <i>Culvert Criteria for Fish Passage</i>; • CDFW's <i>Salmonid Stream Habitat Restoration Manual, Volume 2, Part IX: Fish Passage Evaluation at Stream Crossings</i>; and • National Marine Fisheries Service, <i>Southwest Region Guidelines for Salmonid Passage at Stream Crossings</i>.
51.	Landowners shall conduct regular inspection and maintenance of stream crossings to ensure crossings are not blocked by debris. Refer to California Board of Forestry Technical Rule No. 5 available at: http://www.calforests.org/wp-content/uploads/2013/10/Adopted-TRA5.pdf .
52.	Landowners shall only use rock fords for temporary seasonal crossings on small watercourses where aquatic life passage is not required during the time period of use. Rock fords shall be oriented perpendicular to the flow of the watercourse and designed to maintain the range of surface flows that occur in the watercourse. When constructed, rock shall be sized to withstand the range of flow events that occur at the crossing and rock shall be maintained at the rock ford to completely cover the channel bed and bank surfaces to minimize soil compaction, rutting, and erosion. Rock must extend on either side of the ford up to the break in slope. The use of rock fords as watercourse crossings for all-weather access road use is prohibited.
53.	Landowners shall ensure that culverts used at watercourse crossings are designed to direct flow and debris toward the inlet (e.g., use of wing-walls, pipe beveling, rock armoring, etc.) to prevent erosion of road fill, debris blocking the culvert, and watercourses from eroding a new channel.

54.	Landowners shall regularly inspect and maintain the condition of access roads, access road drainage features, and watercourse crossings. At a minimum, Landowners shall perform inspections prior to the onset of fall and winter precipitation and following storm events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation. Landowners are required to perform all of the following maintenance: <ul style="list-style-type: none"> • Remove any wood debris that may restrict flow in a culvert. • Remove sediment that impacts access road or drainage feature performance. • Place any removed sediment in a location outside the riparian setbacks and stabilize the sediment. • Maintain records of access road and drainage feature maintenance and consider redesigning the access road to improve performance and reduce maintenance needs.
55.	Landowners shall compact access road crossing approaches and fill slopes during installation and shall stabilize them with rock or other appropriate surface protection to minimize surface erosion. When possible, Landowners shall ensure that access roads over culverts are equipped with a critical dip to ensure that, if the culvert becomes blocked or plugged, water can flow over the access road surface without washing away the fill prism. Access road crossings where specific conditions do not allow for a critical dip or in areas with potential for significant debris accumulation, shall include additional measures such as emergency overflow culverts or oversized culverts that are designed by a qualified professional.
56.	Landowners shall ensure that culverts used at watercourse crossings are: 1) installed parallel to the watercourse alignment to the extent possible, 2) of sufficient length to extend beyond stabilized fill/sidecast material, and 3) embedded or installed at the same level and gradient of the streambed in which they are being placed to prevent erosion.

Soil Disposal and Spoils Management

57.	Landowners shall store soil, construction, and waste materials outside the riparian setback except as needed for immediate construction needs. Such materials shall not be stored in locations of known slope instability or where the storage of construction or waste material could reduce slope stability.
58.	Landowners shall separate large organic material (e.g., roots, woody debris, etc.) from soil materials. Landowners shall either place the large organic material in long-term, upland storage sites, or properly dispose of these materials offsite.
59.	Landowners shall store erodible soil, soil amendments, and spoil piles to prevent sediment discharges in storm water. Storage practices may include use of tarps, upslope land contouring to divert surface flow around the material, or use of sediment control devices (e.g., silt fences, straw wattles, etc.).
60.	Landowners shall contour and stabilize stored spoils to mimic natural slope contours and drainage patterns (as appropriate) to reduce the potential for fill saturation and slope failure.
61.	For soil disposal sites Landowners shall: <ul style="list-style-type: none"> • revegetate soil disposal sites with a mix of native plant species, • cover the seeded and planted areas with mulched straw at a rate of two tons per acre, and • apply non-synthetic netting or similar erosion control fabric (e.g., jute) on slopes greater than 2:1 if the site is erodible.
62.	Landowners shall haul away and properly dispose of excess soil and other debris as needed to prevent discharge to waters of the state.

Riparian and Wetland Protection and Management

63.	Landowners shall not disturb aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under a CWA section 404 permit, CWA section 401 certification, Regional Water Board WDRs (when applicable), or a CDFW LSA Agreement.
64.	Landowners shall maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharge.

Water Storage and Use

Water Supply, Diversion, and Storage

65.	Landowners shall only install, maintain, and destroy wells in compliance with county, city, and local ordinances and with California Well Standards as stipulated in California Department of Water Resources Bulletins 74-90 and 74-81.
66.	All water diversions for project activities from a surface stream, subterranean stream flowing through a known and definite channel (e.g., groundwater well diversions from subsurface stream flows), or other surface waterbody are subject to the surface water Numeric and Narrative Instream Flow Requirements. This includes lakes, ponds, and springs (unless the spring is deemed exempt by the Deputy Director). See Section 3. Numeric and Narrative Instream Flow Requirements of this Attachment A for more information.
67.	Groundwater diversions may be subject to additional requirements, such as a forbearance period, if the State Water Board determines those requirements are reasonably necessary.
68.	Landowners are encouraged to use appropriate rainwater catchment systems to collect from impermeable surfaces (e.g., roof tops, etc.) during the wet season and store storm water in tanks, bladders, or off-stream engineered reservoirs to reduce the need for surface water or groundwater diversions.
69.	Landowners shall not divert surface water unless it is diverted in accordance with an existing water right that specifies, as appropriate, the source, location of the point of diversion, purpose of use, place of use, and quantity and season of diversion. Landowners shall maintain documentation of the water right at the project site. Documentation of the water right shall be available for review and inspection by the Water Boards, CDFW, and any other authorized representatives of the Water Boards or CDFW.
70.	Landowners shall ensure that all water diversion facilities are designed, constructed, and maintained so they do not prevent, impede, or tend to prevent the passing of fish, as defined by Fish and Game Code section 45, upstream or downstream, as required by Fish and Game Code section 5901. This includes but is not limited to the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream aquatic life movement and migration. Landowners shall allow sufficient water at all times to pass past the point of diversion to keep in good condition any fish that may be planted or exist below the point of diversion as defined by Fish and Game Code section 5937. Landowners shall not divert water in a manner contrary to or inconsistent with these Requirements.
71.	Landowners issued an SIUR by the State Water Board shall not divert surface water unless in compliance with all additional SIUR conditions required by CDFW.
72.	Water diversion facilities shall include satisfactory means for bypassing water to satisfy downstream prior rights and any requirements of policies for water quality control, water quality control plans, water quality certifications, waste discharge requirements, or other local, state or federal instream flow requirements. Landowners shall not divert in a manner that results in injury to holders of legal downstream senior rights. Landowners may be required to curtail diversions should diversion result in injury to holders of legal downstream senior water rights or interfere with maintenance of downstream instream flow requirements.
73.	Fuel powered (e.g., gas, diesel, etc.) diversion pumps shall be located in a stable and secure location outside of the riparian setbacks unless authorized under a 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board. Use of non-fuel powered diversion pumps (solar, electric, gravity, etc.) is encouraged. In all cases, all pumps shall: <ol style="list-style-type: none"> 1. be properly maintained, 2. have suitable containment to ensure any spills or leaks do not enter surface waterbodies or groundwater, and 3. have sufficient overhead cover to prevent exposure of equipment to precipitation.
74.	No water shall be diverted unless the landowner is operating the water diversion facility with a CDFW-approved water-intake screen (e.g. fish screen). The water intake screen shall be designed and maintained in accordance with screening criteria approved by CDFW. The screen shall prevent wildlife from entering the diversion intake and becoming entrapped. The landowner shall contact the regional CDFW Office, LSA Program for information on screening criteria for diversion(s). ¹⁵ The landowner shall provide evidence that demonstrates that the water intake screen is in good condition whenever requested by the Water Boards or CDFW. Points of re-diversion from off-stream storage facilities that are open to the environment shall have a water intake screen, as required by CDFW.
75.	Landowners shall inspect, maintain, and clean water intake screens and bypass appurtenances as directed by CDFW to ensure proper operation for the protection of fish and wildlife.

76.	Landowners shall not obstruct, alter, dam, or divert all or any portion of a natural watercourse prior to obtaining all applicable permits and approvals. Permits may include a valid water right, 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board.
77.	Landowners shall plug, block, cap, disconnect, or remove the diversion intake associated with project activities during the surface water forbearance period, unless the diversion intake is used for other beneficial uses, to ensure no water is diverted during that time.
78.	Landowners shall not divert from a surface water or from a subterranean stream for the project site at a rate more than a maximum instantaneous diversion rate of 10 gallons per minute, unless authorized under an existing appropriative water right.
82.	<p>Onstream storage reservoirs are prohibited unless either:</p> <ul style="list-style-type: none"> · The landowner has an existing water right with irrigation as a designated use, issued prior to October 31, 2017, that authorizes the onstream storage reservoir, or · The landowner obtains an appropriative water right permit with irrigation as a designated use prior to diverting water from an onstream storage reservoir for the project site. Landowners with a pending application or an unpermitted onstream storage reservoir shall not divert for project activities until the landowner has obtain a valid water right.
83.	Landowners are encouraged to install separate storage systems for water diverted for irrigation and water diverted for any other beneficial uses, ¹⁶ or otherwise shall install separate measuring devices to quantify diversion to and from each storage facility, including the quantity of water diverted and the quantity, place, and purpose of use (e.g., crop irrigation, domestic, etc.) for the stored water.
84.	<p>The landowner shall install and maintain a measuring device(s) for surface water or subterranean stream diversions. The measuring device shall be, at a minimum equivalent to the requirements for direct diversions greater than 10 acre-feet per year in California Code of Regulations, Title 23, Division 3, Chapter 2.7. The measuring device(s) shall be located as close to the point of diversion as reasonable. Landowners shall maintain daily diversion records for water diverted. Landowners shall maintain separate records that document the amount of water used for project activities separated out from the amount of water used for other irrigation purposes and other beneficial uses of water (e.g., domestic, fire protection, etc.). Landowners shall maintain daily diversion records at the site and shall make the records available for review or by request by the Water Boards CDFW, or any other authorized representatives of the Water Boards or CDFW. Daily diversion records shall be retained for a minimum of five years. Compliance with this term is required for any surface water diversion, even those under 10 acre-feet per year.</p>
85.	The State Water Board intends to develop and implement a basin-wide program for real- time electronic monitoring and reporting of diversions, withdrawals, releases and streamflow in a standardized format if and when resources become available. Such real- time reporting will be required upon a showing by the State Water Board that the program and the infrastructure are in place to accept real-time electronic reports. Implementation of the reporting requirements shall not necessitate amendment to this Requirement.
86.	Landowners shall not use off-stream storage reservoirs and ponds to store water for irrigation unless they are sited and designed or approved by a qualified professional in compliance with Division of Safety of Dams (DSOD), county, and/or city requirements, as applicable. If the DSOD, county, and/or city do not have established requirements they shall be designed consistent with the Natural Resource Conservation Service National Engineering Manual. Reservoirs shall be designed with an adequate overflow outlet that is protected and promotes the dispersal and infiltration of flow and prevents channelization. All off-stream storage reservoirs and ponds shall be designed, managed, and maintained to accommodate average annual winter period precipitation and storm water inputs to reduce the potential for overflow. Landowners shall plant native vegetation along the perimeter of the reservoir in locations where it does not impact the structural integrity of the reservoir berm or spillway. The landowner shall control vegetation around the reservoir berm and spillway to allow for visual inspection of berm and spillway condition and control burrowing animals as necessary.

87.	Landowners shall implement an invasive species management plan prepared by a Qualified Biologist for any existing or proposed water storage facilities that are open to the environment. The plan shall include, at a minimum, an annual survey for bullfrogs and other invasive aquatic species. If bullfrogs or other invasive aquatic species are identified, eradication measures shall be implemented under the direction of a qualified biologist, if appropriate after consultation with CDFW (pursuant to Fish and Game Code section 6400). Eradication methods can be direct or indirect. Direct methods may include hand- held dip net, hook and line, lights, spears, gigs, or fish tackle under a fishing license (pursuant to Fish and Game Code section 6855). An indirect method may involve seasonally timed complete dewatering and a drying period of the off-stream storage facility under a Permit to Destroy Harmful Species (pursuant to Fish and Game Code section 5501) issued by CDFW.
88.	Water storage bladders are not encouraged for long-term use. If bladders are used, the landowner shall ensure that the bladder is designed and properly installed to store water and that the bladder is sited to minimize the potential for water to flow into a watercourse in the event of a catastrophic failure. If a storage bladder has been previously used, the landowner shall carefully inspect the bladder to confirm its integrity and confirm the absence of any interior residual chemicals prior to resuming use. Landowners shall periodically inspect water storage bladders and containment features to ensure integrity. Water storage bladders shall be properly disposed of or recycled and not resold when assurance of structural integrity is no longer guaranteed.
89.	Landowners shall not use water storage bladders unless the bladder is safely contained within a secondary containment system with sufficient capacity to capture 110 percent of a bladder's maximum possible contents in the event of bladder failure (i.e., 110 percent of bladder's capacity). Secondary containment systems shall be of sufficient strength and stability to withstand the forces of released contents in the event of catastrophic bladder failure. In addition, secondary containment systems that are open to the environment shall be designed and maintained with sufficient capacity to accommodate precipitation and storm water inputs from a 25-year, 24-hour storm event.
90.	Landowners shall not cause or allow any overflow from off-stream water storage facilities that are closed to the environment (e.g., tanks and bladders) if the off-stream facilities are served by a diversion from surface water or groundwater. Landowners shall regularly inspect for and repair all leaks of the diversion and storage system.
91.	Water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment shall not be located in a riparian setback or next to equipment that generates heat. Landowners shall place water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment in areas that allow for ease of installation, access, maintenance, and minimize road development.
92.	Landowners shall install vertical and horizontal tanks according to manufacturer's specifications and shall place tanks on properly compacted soil that is free of rocks and sharp objects and capable of bearing the weight of the tank and its maximum contents with minimal settlement. Tanks shall not be located in areas of slope instability. Landowners shall install water storage tanks capable of containing more than 8,000 gallons only on a reinforced concrete pad providing adequate support and enough space to attach a tank restraint system (anchor using the molded-in tie down lugs with moderate tension, being careful not to over-tighten) per the recommendations of a qualified professional.
93.	To prevent rupture or overflow and runoff, Landowners shall only use water storage tanks and bladders equipped with a float valve, or equivalent device, to shut off diversion when storage systems are full. Landowners shall install any other measures necessary to prevent overflow of storage systems to prevent runoff and the diversion of more water than can be used and/or stored.
94.	Landowners shall ensure that all vents and other openings on water storage tanks are designed to prevent the entry and/or entrapment of wildlife.
95.	Landowners shall retain, for a minimum of five years, appropriate documentation for any hauled water ¹⁸ used for irrigation. Documentation for hauled water shall include, for each delivery, all of the following: <ol style="list-style-type: none"> 1. A receipt that shows the date of delivery and the name, address, license plate number, and license plate issuing state for the water hauler, 2. A copy of the Water Hauler's License (California Health and Safety Code section 111120), 3. A copy of proof of the Water Hauler's water right, groundwater well, or other authorization to take water, and the location of the water source, and 4. The quantity of water delivered or picked up from a water source, in gallons. Documentation shall be made available, upon request, to Water Boards or CDFW staff and any other authorized representatives of the Water Boards or CDFW.

Water Conservation and Use	
96.	Landowners shall regularly inspect their entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks.
97.	Landowners shall use weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss.
98.	Landowners shall implement water conserving irrigation methods (e.g., drip or trickle irrigation, micro-spray, or hydroponics).
99.	Landowners shall maintain daily records of all water used for irrigation. Daily records may be calculated by the use of a measuring device or, if known, by calculating the irrigation system rates and duration of time watered (e.g., irrigating for one hour twice per day using 50 half-gallon drips equates to 50 gallons per day (1*2*50*0.5) of water used for irrigation). Landowners shall retain, for a minimum of 5 years, irrigation records at the site and shall make all irrigation records available for review by the Water Boards, CDFW and any other authorized representatives of the Water Boards or CDFW.
Irrigation Runoff	
100.	Landowners shall regularly inspect for leaks in mainlines ¹⁹ , laterals ²⁰ , in irrigation connections, sprinkler heads, or at the ends of drip tape and feeder lines and immediately repair any leaks found upon detection.
101.	The irrigation system shall be designed to include redundancy (e.g., safety valves) in the event that leaks occur, so that waste of water and runoff is prevented and minimized.
102.	Landowners shall regularly replace worn, outdated, or inefficient irrigation system components and equipment to ensure a properly functioning, leak-free irrigation system at all times.
103.	Landowners shall minimize irrigation deep percolation ²¹ by applying irrigation water at agronomic rates.
Fertilizers, Pesticides, and Petroleum Products	
104.	Landowners shall not mix, prepare, over apply, or dispose of agricultural chemicals/products (e.g., fertilizers, pesticides, and other chemicals as defined in the applicable water quality control plan) in any location where they could enter the riparian setback or waters of the state. The use of agricultural chemicals inconsistently with product labeling, storage instructions, or DPR requirements for pesticide applications is prohibited. Disposal of unused product and containers shall be consistent with labels.
105.	Landowners shall keep and use absorbent materials designated for spill containment and spill cleanup equipment on-site for use in an accidental spill of fertilizers, petroleum products, hazardous materials, and other substances which may degrade waters of the state. The landowner shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and immediately initiate cleanup activities for all spills that could enter a waterbody or degrade groundwater.
106.	Landowners shall establish and use a separate storage area for pesticides, and fertilizers, and another storage area for petroleum or other liquid chemicals (including diesel, gasoline, oils, etc.). All such storage areas shall comply with the riparian setback Requirements, be in a secured location in compliance with label instructions, outside of areas of known slope instability, and be protected from accidental ignition, weather, and wildlife. All storage areas shall have appropriate secondary containment structures, as necessary, to protect water quality and prevent spillage, mixing, discharge, or seepage. Storage tanks and containers must be of suitable material and construction to be compatible with the substances stored and conditions of storage, such as pressure and temperature.
107.	Throughout the wet season, Landowners shall ensure that any temporary storage areas have a permanent cover and side-wind protection or be covered during non-working days and prior to and during rain events.
108.	Landowners shall only use hazardous materials in a manner consistent with the product's label.
109.	Landowners shall only keep hazardous materials in their original containers with labels intact and shall store hazardous materials to prevent exposure to sunlight, excessive heat, and precipitation. Landowners shall provide secondary containment for hazardous materials to prevent possible exposure to the environment. Disposal of unused hazardous materials and containers shall be consistent with the label.

110.	Landowners shall only mix, prepare, apply, or load hazardous materials outside of the riparian setbacks.
111.	Landowners shall not apply agricultural chemicals within 48 hours of a predicted rainfall event of 0.25 inches or greater with a probability greater than 50-percent. In the Lake Tahoe Hydrologic Unit, Landowners shall not apply agricultural chemicals within 48 hours of any weather pattern that is forecast to have a 30 percent or greater chance of precipitation greater than 0.1 inch per 24 hours. This requirement may be updated based on amendments to the Lahontan Regional Water Board construction storm water general order.
Fertilizers and Soils	
112.	To minimize infiltration and water quality degradation, Landowners shall irrigate and apply fertilizer to consistent with the crop need (i.e., agronomic rate).
113.	When used, Landowners shall apply nitrogen to cultivation areas consistent with crop need (i.e., agronomic rate). Landowners shall not apply nitrogen at a rate that may result in a discharge to surface water or groundwater that causes or contributes to exceedance of water quality objectives, and no greater than 319 pounds/acre/year unless plant tissue analysis performed by a qualified individual demonstrates the need for additional nitrogen application. The analysis shall be performed by an agricultural laboratory certified by the State Water Board's Environmental Laboratory Accreditation Program.
114.	Landowners shall ensure that potting soil or soil amendments, when not in use, are placed and stored with covers, when needed, to protect from rainfall and erosion, to prevent discharge to waters of the state, and to minimize leaching of waste constituents into groundwater.
Pesticides and Herbicides	
115.	Landowners shall not apply restricted materials, including restricted pesticides, or allow restricted materials to be stored at the site.
116.	Landowners shall implement integrated pest management strategies where possible to reduce the need and use of pesticides and the potential for discharges to waters of the state.
Petroleum Products and Other Chemicals	
117.	Landowners shall only refuel vehicles or equipment outside of riparian setbacks. Landowners shall inspect all equipment using oil, hydraulic fluid, or petroleum products for leaks prior to use and shall monitor equipment for leakage. Stationary equipment (e.g., motors, pumps, generators, etc.) and vehicles not in use shall be located outside of riparian setbacks. Spill and containment equipment (e.g., oil spill booms, sorbent pads, etc.) shall be stored onsite at all locations where equipment is used or staged.
118.	Landowners shall store petroleum, petroleum products, and similar fluids in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain.
119.	Use of an underground storage tank(s) for the storage of petroleum products is allowed if compliant with all applicable federal, state, and local laws; regulations; and permitting requirements.
Cultivation-Related Waste	
120.	Landowners shall contain and regularly remove all debris and trash associated with cultivation activities from the cultivation site. Landowners shall only dispose of debris and trash at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Landowners shall not allow litter, plastic, or similar debris to enter the riparian setback or waters of the state. Plant material may be disposed of onsite in compliance with any applicable CDFA license conditions.
121.	Landowners shall only dispose or reuse spent growth medium (e.g., soil and other organic media) in a manner that prevents discharge of soil and residual nutrients and chemicals to the riparian setback or waters of the state. Spent growth medium shall be covered with plastic sheeting or stored in water tight dumpsters prior to proper disposal or reuse. Spent growth medium should be disposed of at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Proper reuse of spent growth medium may include incorporation into garden beds or spreading on a stable surface and revegetating the surface with native plants. Landowners shall use erosion control techniques, as needed, for any reused or stored spent growth medium to prevent polluted runoff.

Refuse and Domestic Waste

122.	Landowners shall ensure that debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement and concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to any life stage of fish and wildlife or their habitat (includes food sources) does not contaminate soil or enter the riparian setback or waters of the state.
123.	Landowners shall not dispose of domestic wastewater unless it meets applicable local agency and/or Regional Water Board requirements. Landowners shall ensure that human or animal waste is disposed of properly. Landowners shall ensure onsite wastewater treatment systems (e.g., septic system) are permitted by the local agency or applicable Regional Water Board.
124.	If used, chemical toilets or holding tanks shall be maintained in a manner appropriate for the frequency and conditions of usage, sited in stable locations, and comply with the riparian setback Requirements.

Winterization

125.	Landowners shall implement all applicable Erosion Control and Soil Disposal and Spoils Management Requirements in addition to the Winterization Requirements below by the onset of the winter period.		
126.	Landowners shall block or otherwise close any temporary access roads to all motorized vehicles no later than the onset of the winter period each year.		
127.	Landowners shall not operate heavy equipment of any kind at the site during the winter period, unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction.		
128.	Landowners shall apply linear sediment controls (e.g., silt fences, wattles, etc.) along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow length at the frequency specified below.		
		Slope (percent)	Sheet Flow Length Not to Exceed (feet)
		0 – 25	20
		25 – 50	15
	>50	10	
129.	Landowners shall maintain all culverts, drop inlets, trash racks and similar devices to ensure they are not blocked by debris or sediment. The outflow of culverts shall be inspected to ensure erosion is not undermining the culvert. Culverts shall be inspected prior to the onset of fall and winter precipitation and following precipitation events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation to determine if maintenance or cleaning is required.		
130.	Landowners shall stabilize all disturbed areas and construction entrances and exits to control erosion and sediment discharges from land disturbance.		
131.	Landowners shall cover and berm all loose stockpiled construction materials (e.g., soil, spoils, aggregate, etc.) that are not actively (scheduled for use within 48 hours) being used as needed to prevent erosion by storm water. The landowner shall have adequate cover and berm materials available onsite if the weather forecast indicates a probability of precipitation.		
132.	Landowners shall apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to waters of the state.		
133.	As part of the winterization plan approval process, the Regional Water Board may require Landowners to implement additional site-specific erosion and sediment control requirements if the implementation of the Requirements in this section do not adequately protect water quality.		

Appendix G

Protocol-level Botanical Survey Report

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

BOTANICAL REPORT OF SPECIAL STATUS NATIVE PLANT POPULATIONS AND NATURAL COMMUNITIES

APN: 105-101-011 & 104-232-005

1414 Chambers Road
Petrolia, CA 95558

Prepared For:

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Date Prepared:

September 21st, 2021

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Summary Information

Legal description:	Portion of section 2 of T2S, R2W, H.B.&M.
APN:	105-101-011 & 104-232-005
USGS 7.5' Quad:	Petrolia (4012433)
Parcel size:	436 Acres
Dates of survey:	March 21 st and June 21 st , 2021
Surveyed by:	Georgia Hamer and Sarah Mason
Field survey effort:	7 hours
Results:	<u>No CRPR 1 or 2 plants were observed</u>

Introduction, Background, and Project Understanding

Purpose and Need

This botanical survey report was prepared to assess potential impacts to botanical resources and summarizes the results of a survey conducted in Humboldt County near Petrolia, California (APN: 105-101-011 and 104-232-005). The survey was performed to identify special status plants and sensitive plant communities that could be impacted by operations associated with the cultivation of cannabis within the parcels in accordance with the California Environmental Quality Act (CEQA) using the California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Project Description and Setting

The proposed project is for approximately 5 acres of cannabis cultivation, 3 acres of full sun outdoor and 2 acres of greenhouses, within two parcels totaling to 436 acres. The land was historically utilized for grazing and is dominated by several invasive grass species.

The parcel address is located at 1414 Chambers Road, Petrolia, CA, 95558-0029. The parcels are approximately 1.8 miles east of downtown Petrolia, California within the Petrolia USGS 7.5-minute quadrangle (Quad code: 4012433), section 2, T2S, R2W, H.B.&M. The center location of the project area is 40°19'34.91" N 124°15'51.51"W at an elevation of 289 feet (88 meters) above sea level (Google Earth Pro, 2021).

Soil, Topography, and Hydrology

Data from *Web Soil Survey* for the project area do not indicate any unique soil types that would provide habitat for rare plants such as serpentinite or peat.

The project area is situated within the lower foothills of the North Coast Ranges approximately 1.0 mile north of the Mattole River. The project area lies within the Mill Creek watershed which drains into the Pacific Ocean via the Mattole River. Refer to Figure 1 (Appendix C) for locator map.

The project area is on a very slight west facing aspect ranging from ~260 to ~315 feet in elevation.

Definitions

Special Status Plants and Plant Communities

Special status plants include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) in addition to plants which meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). CDFW recommends that plants on California Rare Plant Ranks (CRPR) Lists 1A (presumed extinct or extirpated), 1B (rare, threatened, or endangered in California and elsewhere), 2A (presumed extirpated) and 2B (rare, threatened, or endangered in California but more common elsewhere), or other species that warrant consideration based on local or biological significance, be addressed during California Environmental Quality Act (CEQA) review of proposed projects. Plants of rank 3 and 4, which are under review and watch lists respectively, are addressed by Naiad Biological Consulting, and may warrant consideration under CEQA if potential or cumulative impacts to the plant exist.

CDFW's natural community rarity rankings follow NatureServe's 2012 *NatureServe Conservation Status Assessment: Methodology for Assigning Ranks*, in which all alliances are listed with a global (G) and (S) rank. NCSC are those natural communities that are ranked S1 to S3 (CDFW, 2020), where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

Methods

Pre-Site Visit Data Compilation and Preparation

Prior to conducting the field surveys, the following database information was reviewed to determine the location and types of botanical resources that possibly exist in the survey area. This pre-field investigation included searches of the California Natural Diversity Database (CNDDDB, 2021) and the California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPS, 2021). This list includes CRPR (California Rare Plant Rank) 1 and 2 plants that have been observed within a 9-quad search centered on the *Petrolia* quadrangle. Because this quadrangle is coastal, only 7 quadrangles lie within the 9-quad search. USGS quadrangles within the search area include: Buckeye Mtn. (4012432), Cape Mendocino (4012444), Capetown (4012443), Cooskie Creek (4012423), *Petrolia* (4012433), Shubrick Peak (4012422), and Taylor Peak (4012442). The results of the project scoping are presented below in Table 1 (Appendix A).

Botanical Field Survey and Habitat Investigation

The early season, March 21st, botanical field survey for this project was completed by Georgia Hamer. Georgia holds a BS in Biology with a concentration in Ecology from Humboldt State University (HSU). Georgia has worked professionally as a Botanist for the Native Land Trust of New England, the Lakeview, OR district Bureau of Land Management (BLM), and for the last 3 years at Pacific Watershed Associates in Humboldt County. Georgia specializes in botanical inventories, environmental restoration plans, and rare plant identification and protection.

The late season, June 21st, botanical field survey for this project was completed by Sarah Mason. Sarah holds a BS in Botany from Humboldt State University. Sarah has worked as an assistant botanist and biologist with Caltrans, as a Botanical Technician for the Klamath and Bitterroot National Forests, and is currently working towards receiving her MSc in Biology with a concentration in bumblebee ecology. Sarah has experience in rare plant identification, invasive species removal, protection and monitoring of rare plants, and teaching plant taxonomy at the university level.

Surveys were floristic in nature and conducted in a manner consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Plants were identified to the lowest taxonomic level necessary to ensure that they were not a species of concern. Plants not identifiable in the field were identified off site with the use of *The Jepson Manual, Vascular Plants of California*. Other resources used to identify plants can be found in the reference section towards the end of this report.

Botanical surveys were conducted throughout the areas proposed for cultivation operations and the associated road system. Surveys were conducted in an intuitive meander focused on areas likely to provide habitat for rare plant species and/or potentially affected (directly or indirectly) by cultivation operations. These areas include but are not limited to: existing permanent and seasonal roads, new road construction, road points and crossings, forest openings (i.e., meadows, landings, and cut banks), springs and watercourses. Refer to Figure 2 (Appendix C) for the survey routes.

Results

Habitats Observed

No special-status vegetation communities or habitats were observed during the botanical survey of the project area. The project area habitat is typical of valley and foothill grasslands and coastal prairie within the lower foothills of the Northern Coast Ranges. The surrounding areas are typical of North Coast coniferous forest and mixed evergreen forest, dominated by Douglas-fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*). There is a small stretch of riparian woodland, where a portion of Mill creek runs through, just south of the project area and along the road leading to the pasture. There is no canopy or shrub layer within the project area. Some native grasses are present, including *Festuca idahoensis*, but no sensitive natural communities could be established during surveys due to the large amount of invasive grasses present, consistent with historic grazing. No watercourses exist within the project area. See figures 3, 4, and 5 (Appendix D) for example photos of project area and habitats present.

Species Observed

No CRPR 1 or 2 plants were encountered in the project area. *Hesperocyparis macrocarpa* (Monterey cypress), a CRPR of 1B.2 in its natural range, was observed during surveys but is believed to be a planted ornamental and should not be impacted by cultivation operations. See figure 4 (Appendix D) for photo of planted Monterey cypress.

Refer to Table 2 (Appendix B) for a list of species observed in the project area. A total of 82 plant taxa were observed in the project area, of which approximately 48% are non-native and 27% are invasive. Several invasive grass species, such as slender wild oat (*Avena barbata*), Italian rye grass (*Festuca perennis*), and soft chess (*Bromus hordeaceus*), dominate the project area.

Conclusion and Discussion

Conclusion

Results of the botanical field survey indicate that negative impacts to sensitive species or sensitive habitats will not occur as a result of the development of cannabis cultivation at the particular site investigated and surveyed.

Although no listed species were observed during the field survey, it is possible that previous ground disturbances, existing drought conditions, which may alter bloom times and durations, as well as herbivory by deer could have affected the survey results.

Recommendations

Due to the low quality of habitat, from historic grazing and high numbers of invasive grasses present, no sensitive plant species, communities, or habitats were encountered during the botanical field survey. It is not expected that cultivation operations will impact habitats further. No further botanical surveys are recommended.

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Appendix A. Results from database search

Table 1. Target special-status plants of the project area

Petrolia and surrounding 7.5 min quadrangles							
Scientific Name	Common Name	CRPR	Bloom Period	Lifeform	Habitat	Micro Habitat	Elevation (m)
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	1B.2	Mar-Jun	annual herb	Coastal Strand, Northern Coastal Scrub	dunes, coastal	0 - 215 meters
<i>Layia carnosa</i>	beach layia	1B.1	Mar-Jul	annual herb	Coastal Strand, Northern Coastal Scrub (sandy)	dunes, coastal	0 - 60 meters
<i>Packera bolanderi</i> var. <i>bolanderi</i>	seacoast ragwort	2B.2	May-Jul	perennial rhizomatous herb	Coastal scrub; North Coast coniferous forest	Sometimes roadsides.	30 - 650 meters
<i>Erysimum concinnum</i>	bluff wallflower	1B.2	Feb-Jul	annual / perennial herb	Coastal bluff scrub, coastal dunes, coastal prairie	dunes, coastal	0 - 185 meters
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	1B.2	(Apr)Jun-Oct	perennial herb	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	dunes, coastal	0 - 30 meters
<i>Romanzoffia tracyi</i>	Tracy's romanzoffia	2B.3	Mar-May	perennial herb	Coastal bluff scrub. Coastal scrub	rocky	15 -30 meters
<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	1B.1	Jun	perennial rhizomatous herb	Cismontane woodland (openings), Valley and foothill grassland	Known in CA from only one occurrence near Cape Ridge.	NA
<i>Erythronium oregonum</i>	giant fawn lily	2B.2	Mar-Jun	perennial bulbiferous herb	Cismontane woodland	sometimes serpentinite, rocky, openings; Meadows and seeps	100 - 1150 meters
<i>Erythronium revolutum</i>	coast fawn lily	2B.2	Mar-Jul	perennial bulbiferous herb	Broadleaved upland forest; North Coast coniferous forest	Mesic, streambanks; Bogs and fens	0 - 1600 meters
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	1B.2	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest	often roadcuts.	15 - 880 meters

<i>Montia howellii</i>	Howell's montia	2B.2	Mar-May	annual herb	North Coast coniferous forest	Vernally mesic, sometimes roadsides; Meadows and seeps; Vernal pools	0 - 835 meters
<i>Oenothera wolfii</i>	Wolf's evening-primrose	1B.1	May-Oct	perennial herb	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	sandy, usually mesic.	3 - 800 meters
<i>Piperia candida</i>	white-flowered rein orchid	1B.2	May-Sep	perennial herb	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentinite	30 - 1310 meters
<i>Castilleja litoralis</i>	Oregon coast paintbrush	2B.2	Jun-Jul	perennial herb (hemiparasitic)	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	15 - 100 meters
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	1B.2	Apr-Aug	annual herb	Coastal bluff scrub; Chaparral (openings); Coastal prairie; Valley and foothill grassland	NA	5 - 1665 meters
<i>Gilia millefoliata</i>	dark-eyed gilia	1B.2	Apr - Jul	annual herb	Coastal Dunes	Sandy	0 - 30 meters
<i>Polemonium carneum</i>	Oregon polemonium	2B.2	Apr-Sep	perennial herb	Coastal prairie, Coastal scrub, Lower montane coniferous forest	NA	0 - 1830 meters

Appendix B. Plant Species Observed

Table 2. List of plant species encountered during surveys

Genus	Common Name	Origin
Trees		
<i>Abies grandis</i>	grand fir	Native
<i>Alnus rubra</i>	red alder	Native
<i>Arbutus menziesii</i>	Pacific madrone	Native
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	Native (planted)
<i>Notholithocarpus densiflorus</i>	tan aok	Native
<i>Picea sitchensis</i>	sitka spruce	Native
<i>Pseudotsuga menziesii</i>	Douglas-fir	Native
<i>Sequoia sempervirens</i>	coast redwood	Native
<i>Tsuga heterophylla</i>	Western hemlock	Native
<i>Umbellularia californica</i>	bay laurel	Native
Shrubs		
<i>Baccharis pilularis</i>	coyote brush	Native
<i>Ceanothus thrysiflorus</i>	blueblossom	Native
<i>Frangula californica</i>	coffee berry	Native
<i>Genista monspessulana</i>	French broom	Cal-IPC High
<i>Lonicera hispidula</i>	pink honeysuckle	Native
<i>Oemleria cerasiformis</i>	oso berry	Native
<i>Ribes bracteosum</i>	stink currant	Native
<i>Rosa pisocarpa</i>	cluster rose	Native
<i>Rubus parviflorus</i>	thimble berry	Native
<i>Rubus ursinus</i>	California blackberry	Native
<i>Sambucus racemosa</i>	red elderberry	Native
<i>Toxicodendron diversilobum</i>	poison oak	Native
Grass & Graminoids		
<i>Agrostis stolonifera</i>	creeping bentgrass	Cal-IPC Limited
<i>Avena barbata</i>	slender oat	Cal-IPC Moderate
<i>Cynosurus echinatus</i>	dogtail grass	Cal-IPC Moderate
<i>Festuca idahoensis</i>	Idaho fescue	Native
<i>Holcus lanatus</i>	velvet grass	Cal-IPC Moderate
<i>Poa annua</i>	annual bluegrass	Non-native
<i>Briza maxima</i>	rattlesnake grass	Cal-IPC Limited
<i>Aira caryophylla</i>	silver hair grass	Non-native
<i>Festuca perennis</i>	Italian rye grass	Cal-IPC Moderate
<i>Anthoxanthum odoratum</i>	sweet vernal grass	Cal-IPC Limited
<i>Hordeum marinum</i>	Mediterranean barley	Cal-IPC Moderate
<i>Bromus hordeaceus</i>	soft chess	Cal-IPC Limited
<i>Festuca subuliflora</i>	crinkle-awn fescue	Native
<i>Poa pratensis</i>	Kentucky blue grass	Cal-IPC Limited
<i>Bromus diandrus</i>	ripgut brome	Cal-IPC Moderate
<i>Dactylis glomerata</i>	orchard grass	Cal-IPC Limited

<i>Luzula subsessilis</i>	Pacific woodrush	Native
Forbs		
<i>Adenocaulon bicolor</i>	trail plant	Native
<i>Aquilegia formosa</i>	Western columbine	Native
<i>Bellis perennis</i>	English daisy	Non-native
<i>Cichorium intybus</i>	chicory	Non-native
<i>Clinopodium douglasii</i>	yerba buena	Native
<i>Conium maculatum</i>	poison hemlock	Cal-IPC Moderate
<i>Crepis capillaris</i>	hawksbeard	Non-native
<i>Daucus carota</i>	Queen Anne's lace	Non-native
<i>Digitalis purpurea</i>	foxglove	Cal-IPC Limited
<i>Erodium botrys</i>	long beaked filaree	Non-native
<i>Galium aparine</i>	goose grass	Native
<i>Galium muricatum</i>	Humboldt bedstraw	Native
<i>Geranium molle</i>	crane's bill geranium	Non-native
<i>Heuchera micrantha</i>	alumroot	Native
<i>Hypochaeris glabra</i>	smooth cat's ear	Cal-IPC Limited
<i>Hypochaeris radicata</i>	rough cat's ear	Cal-IPC Moderate
<i>Iris sp.</i>	Iris	Native
<i>Lisichiton americanus</i>	yellow skunk cabbage	Native
<i>Lupinus bicolor</i>	annual lupine	Native
<i>Lysimachia arvensis</i>	scarlet pimpernel	Non-native
<i>Marah oregana</i>	man root	Native
<i>Matricaria discoidea</i>	pineapple weed	Native
<i>Mentha pulegium</i>	pennyroyal	Cal-IPC Moderate
<i>Osmorhiza berteroi</i>	sweet cicely	Native
<i>Oxalis corniculata</i>	creeping wood sorrel	Non-native
<i>Plantago lanceolata</i>	English plantain	Cal-IPC Limited
<i>Rumex acetosella</i>	sheep sorrel	Cal-IPC Limited
<i>Rumex crispus</i>	curly dock	Cal-IPC Moderate
<i>Sanicula crassicaulis</i>	Pacific sanicle	Native
<i>Scrophularia californica</i>	California bee plant	Native
<i>Silybium marianum</i>	milk thistle	Cal-IPC Limited
<i>Spergula arvensis</i>	corn spurry	Non-Native
<i>Stachys bullata</i>	Southern hedge nettle	Native
<i>Stellaria media</i>	chickweed	Non-native
<i>Torilis nodosa</i>	short sock-destroyer	Non-native
<i>Trifolium dubium</i>	little hop clover	Non-native
<i>Trifolium repens</i>	white clover	Non-native
<i>Vicia sativa</i>	spring vetch	Non-native
Ferns & Allies		
<i>Equisetum arvense</i>	common horsetail	Native
<i>Pentagramma triangularis</i>	gold back fern	Native
<i>Polystichum munitum</i>	Western swordfern	Native
<i>Pteridium aquilinum</i>	Western bracken fern	Native

Appendix C. Maps

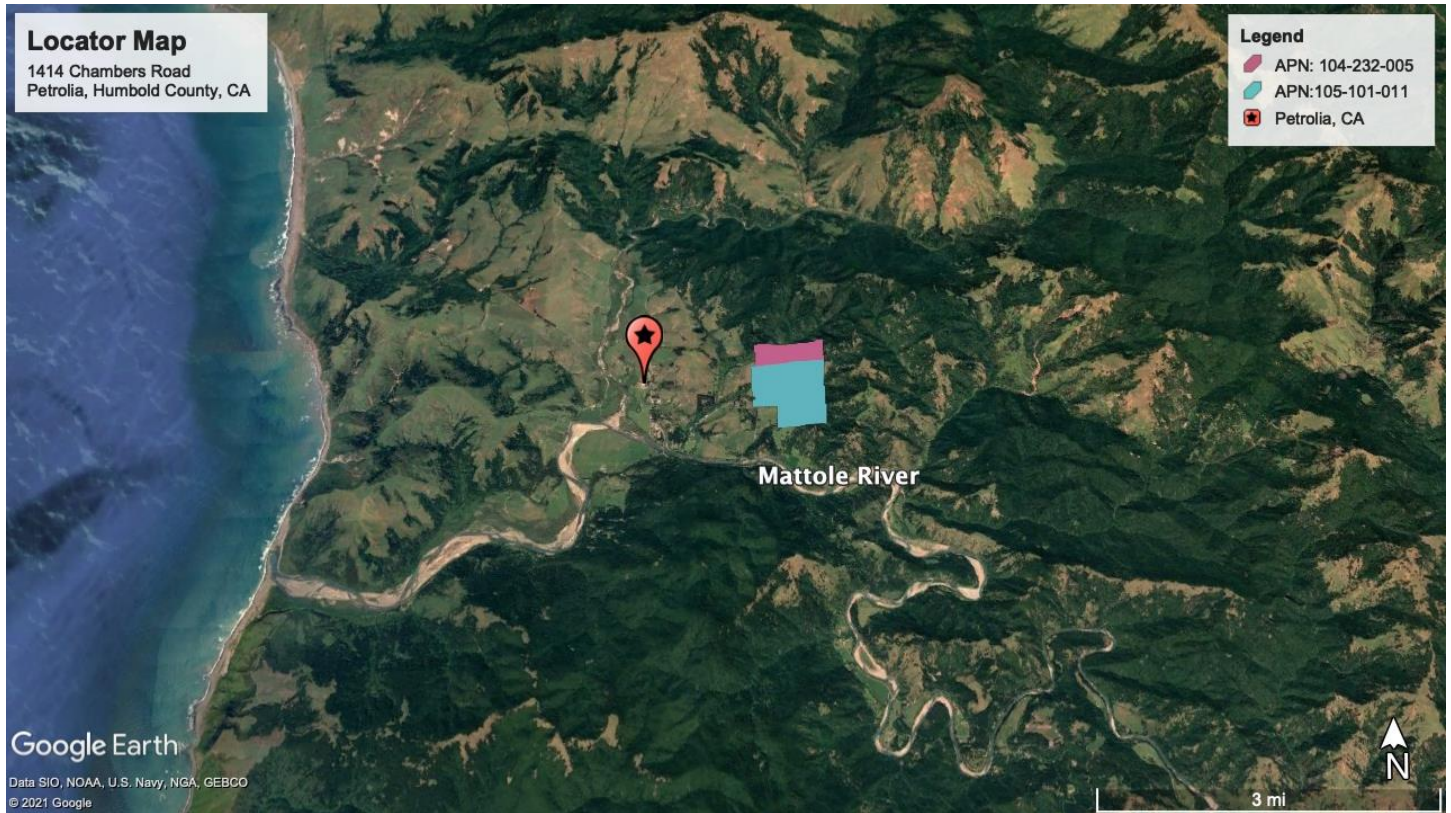


Figure 1. Locator Map of Project Area (blue and pink polygons) and the nearest town of Petrolia, CA (red star).

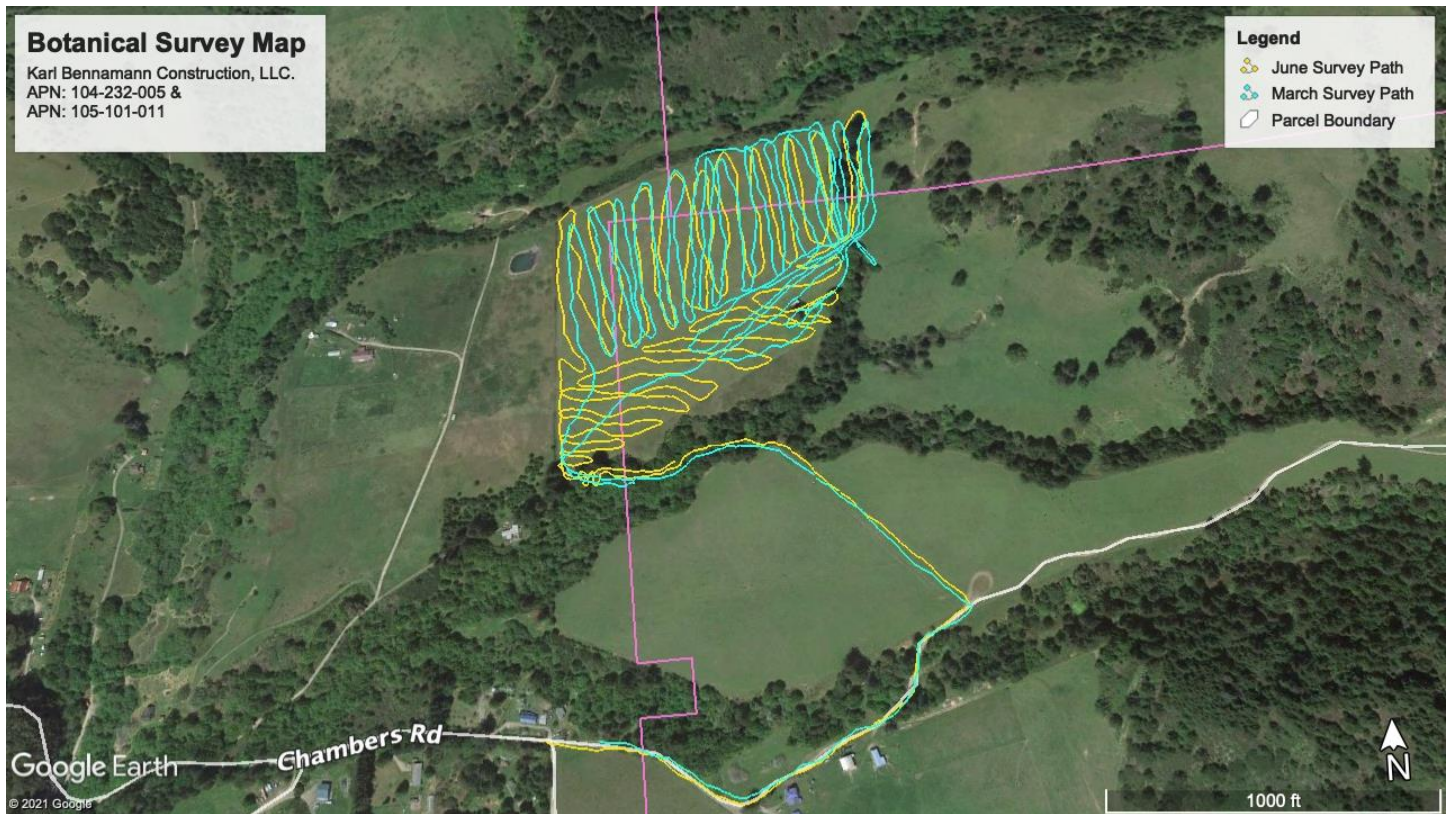


Figure 2. Map of project area and survey routes.

Appendix D. Project Area and Habitats



Figure 3. Project area in coastal prairie habitat, dominated by several invasive grasses, and mixed evergreen forest in background.



Figure 4. Planted Monterey Cypress.



Figure 5. Riparian woodland within northern portion of Mill Creek. Location south, and outside, of project area.

Appendix H

Golden Eagle Survey Interim Report

BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021

GOLDEN EAGLE SURVEY

INTERIM REPORT

August 22nd, 2021

1414 Chambers Road
Petrolia, CA, 95536

Survey conducted and report prepared by Phil Johnston. Phil Johnston is a contracted professional Wildlife Tracker and Researcher. Phil received his BS in Wildlife Management and Conservation from HSU and is currently employed as a Mountain Lion and Fisher Biologist for Hoopa Tribal Forestry. Phil has extensive experience working with carnivores in Northern California and is also trained to do Northern Spotted Owl Surveys, Willow Flycatcher surveys, nesting bird surveys and Peregrine Falcon nest surveys.

NESTING BIRD SURVEY: The project area was surveyed for soaring and perched golden eagles from a nearby hill (393328, 4464949) with an excellent view on the morning of 8/22/2021 from 08:30 am until 12:30 pm. Visibility was excellent and raptors could be identified up to 2.5 miles away. The surveyor identified a pair of red-tailed hawks, a pair of red-shouldered hawks, a pair of ravens, and dozens of turkey vultures from this observation point. No golden eagles were observed at any time. Using binoculars and a 600mm lens, mature firs and oaks which would be most likely to house a golden eagle nest, were closely inspected and no evidence of eagle nests of any kind was observed. The pairs of *Buteo* hawks observed were still engaged in territorial nesting behavior and were quite obvious in their activities through vocalizations and soaring. A follow up survey for 4-8 hours starting at dawn in mid February will detect any golden eagles that may be nesting in the area but were not present for this survey, as well as any eagles that may discover the area this winter and establish a new breeding area. The habitat within one mile of the proposed project area contains many mature fir, redwood and oak trees with decent features which would be suitable for a golden eagle nest, but there is no evidence of nesting eagles at the time of this report.

PREY SURVEY: The 10 acre meadow outlined for development in the proposed project was surveyed for presence/abundance of important golden eagle prey species, focusing on black-tailed jackrabbits and California ground squirrels. Black-tailed jackrabbits defecate while feeding and piles of pellets accumulate where the animals spend time. Assessing density from pellet counts is complicated, but transects for pellets are effective in determining presence/absence. California ground squirrels make conspicuous burrows wherever they live, and counting burrows has been used as a method for estimating population density. The 10 acre project area was surveyed in 27 transects totaling 3.8 miles, and the transects were conducted by a Cybertracker Certified "Track and Sign Specialist" with expertise in identifying and interpreting wildlife sign. The surveyor walked slowly and studied the ground for ground squirrel burrows and jackrabbit pellets. The transects encountered zero jackrabbit pellets and zero ground squirrel burrows. The lack of ground squirrel burrows decisively indicates a complete absence of ground squirrels from the project area. Pellets are more difficult to observe, and easier to overlook, but the lack of presence on the transects strongly indicates either very low jackrabbit presence/use or absence all together. Pocket gopher sign was abundant in the meadow, as was sign of at least one American badger hunting pocket gophers. Pocket gophers are not considered an important part of golden eagle diet. California quail and wild turkey sign was present in and around the project area, and both species are considered prey for golden eagles. No small mammals were visibly observed during the transects.



GPS tracks from golden eagle prey species surveys



Left: view from observation point. Right: Gopher sign in the project area.



Left: Turkey vultures soaring, photographed from 2 miles away.

Appendix I

Project Plot Plan

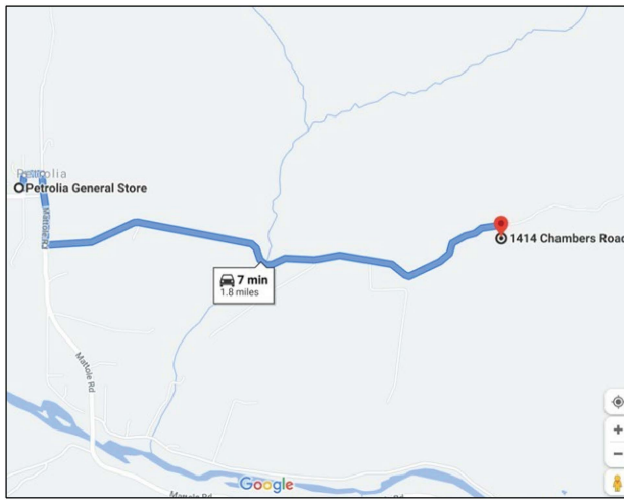
BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

Cisco Farms, LLC

Assessor Parcel Number (APN):

APN: 105 – 101 – 011 & 104 – 232 – 005

September 2021



DRIVING DIRECTIONS FROM PETROLIA GENERAL STORE

1. HEAD NORTH ON SHERMAN AVENUE
2. TURN RIGHT ON GRANT STREET
3. CONTINUE ONTO OLD COAST WAGON ROAD
4. CONTINUE ONTO MATTOLE ROAD (0.2 MILES)
5. TURN LEFT ONTO CHAMBERS ROAD (1.5 MILES TO GATE)

PROJECT INFORMATION

APPLICANT: CISCO FARMS, INC.
 PROPERTY OWNER OF RECORD: BENEMANN FAMILY TRUST
 OWNER ADDRESS: PO BOX 1083, TRINIDAD, CA 95570
 APN: 105-101-011, 104-232-005 & 104-191-001
 PROPERTY ADDRESS: 1414 CHAMBERS ROAD, PETROLIA, CA 95558
 HUMBOLDT COUNTY CANNABIS PERMIT APPLICATION: TBD
 MERGED PROPERTY SIZE: 517 ACRES
 HUMBOLDT COUNTY ZONING: AE-B-5(160)

GENERAL NOTES

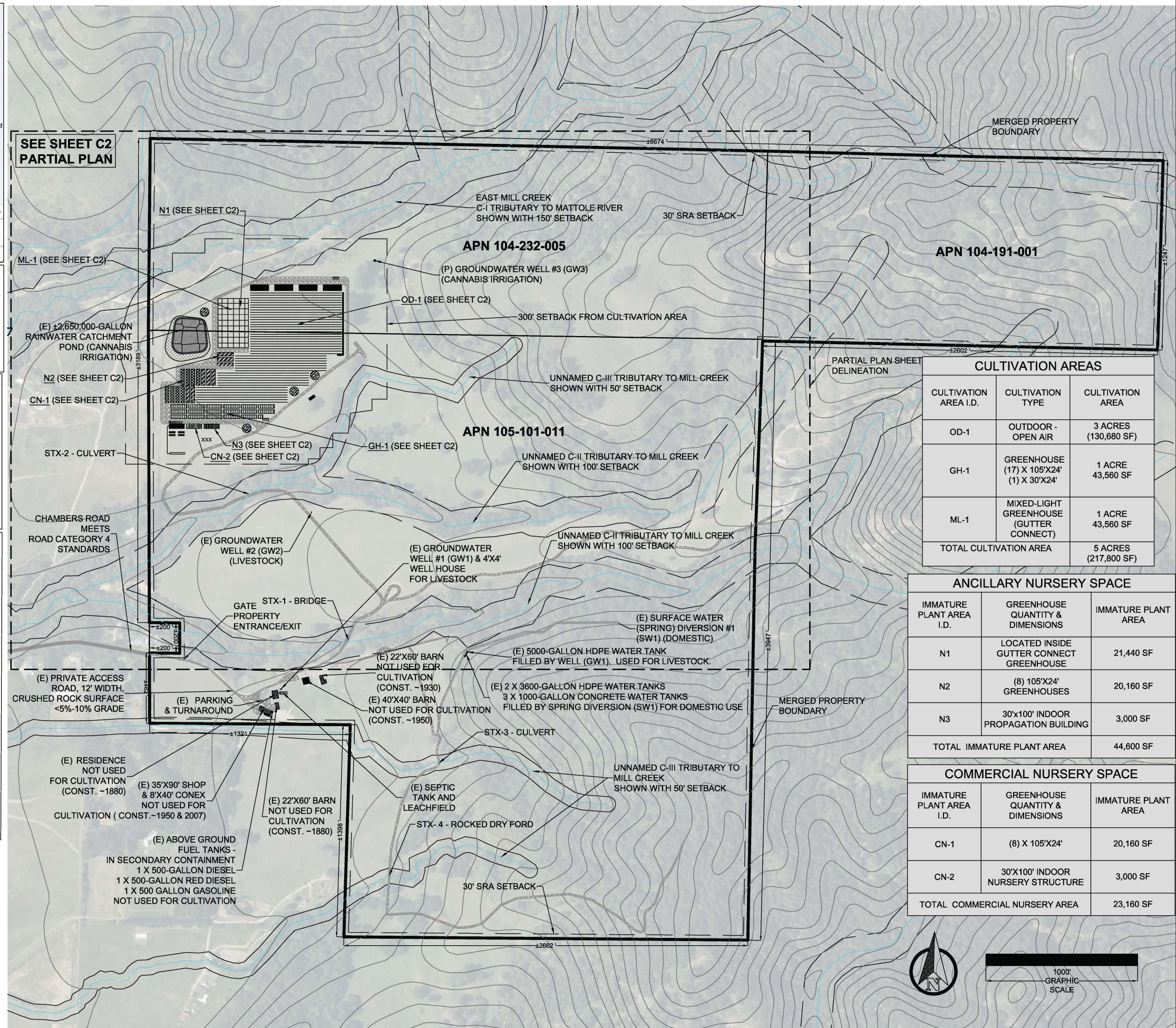
1. NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS, OR KNOWN TRIBAL CULTURAL RESOURCES WITHIN 600 FEET OF CULTIVATION SITES.
2. NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
3. NO UNDEVELOPED PARCEL BOUNDARY WITHIN 300' OF CULTIVATION SITE.
4. NO CULTIVATION OR OPERATIONS WITHIN STREAMSIDE MANAGEMENT AREAS.
5. ALL KNOWN WATERCOURSES SHOWN WITH STREAMSIDE MANAGEMENT AREA BUFFERS.
6. APNS 104-232-005, 104-191-001 & 105-101-011 CONSTITUTE ONE LEGAL PARCEL.
7. CALFIRE WATER STORAGE TANKS TO BE EQUIPPED WITH 2.5" OUTLET W/MALE AMERICAN NATIONAL FIRE HOSE SCREW THREADS.
8. PROPERTY BOUNDARIES SHOWN ARE BASED ON HUMBOLDT COUNTY GIS AND MERGER SURVEY MAPS COMPLETED BY ED GORGE JR., PLS

CULTIVATION WATER SOURCE & STORAGE

1. (P) RAINWATER CATCHMENT
 2. (P) GROUNDWATER WELL (GW3)
- WATER STORAGE**
1. (P) 40 X 5,000 GALLON HDPE WATER STORAGE TANKS - 200,000 GALLONS
 2. (P) RAINWATER CATCHMENT POND - 2,650,000 GALLONS

TOTAL WATER STORAGE: 2,850,000 GALLONS

10,000 GALLONS TO BE HELD IN RESERVE FOR FIRE SUPPRESSION WITH CALFIRE SRA STANDPIPE AND TURNAROUND AREA AS NOTED ON C2.



CULTIVATION AREAS		
CULTIVATION AREA I.D.	CULTIVATION TYPE	CULTIVATION AREA
OD-1	OUTDOOR - OPEN AIR	3 ACRES (130,680 SF)
GH-1	GREENHOUSE (17' X 105' X 24' (1) X 30' X 24')	1 ACRE 43,560 SF
ML-1	MIXED-LIGHT GREENHOUSE (GUTTER CONNECT)	1 ACRE 43,560 SF
TOTAL CULTIVATION AREA		5 ACRES (217,800 SF)

ANCILLARY NURSERY SPACE		
IMMATURE PLANT AREA I.D.	GREENHOUSE QUANTITY & DIMENSIONS	IMMATURE PLANT AREA
N1	LOCATED INSIDE GUTTER CONNECT GREENHOUSE	21,440 SF
N2	(8) 105' X 24' GREENHOUSES	20,160 SF
N3	30' X 100' INDOOR PROPAGATION BUILDING	3,000 SF
TOTAL IMMATURE PLANT AREA		44,600 SF

COMMERCIAL NURSERY SPACE		
IMMATURE PLANT AREA I.D.	GREENHOUSE QUANTITY & DIMENSIONS	IMMATURE PLANT AREA
CN-1	(8) X 105' X 24'	20,160 SF
CN-2	30' X 100' INDOOR NURSERY STRUCTURE	3,000 SF
TOTAL COMMERCIAL NURSERY AREA		23,160 SF



OUREVOLUTION ENGINEERING, INC.
 1821 BUTTERMILK LANE
 ARCATA, CA 95521
 360.791.3259
 ANDY@OUREVOLUTION.COM

NO.	HISTORY / REVISION	BY	CHK.	DATE

CISCO FARMS, INC.
 MERGED PROPERTY APNs 105-101-011, 104-232-005 & 104-191-001
 1414 CHAMBERS ROAD, PETROLIA, CA 95558

CULTIVATION SITE PLAN OVERVIEW

DRAWN	ACS
CHECK	GAC
APPROVED	ACS
DATE	06/27/2021
JOB NUMBER	CF-001
SHEET	
C1	



OUREVOLUTION ENGINEERING, INC.
 1821 BUTTERMILK LANE
 ARCATA, CA 95521
 360.791.3259
 ANDY@OUREVOLUTION.COM

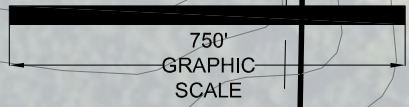
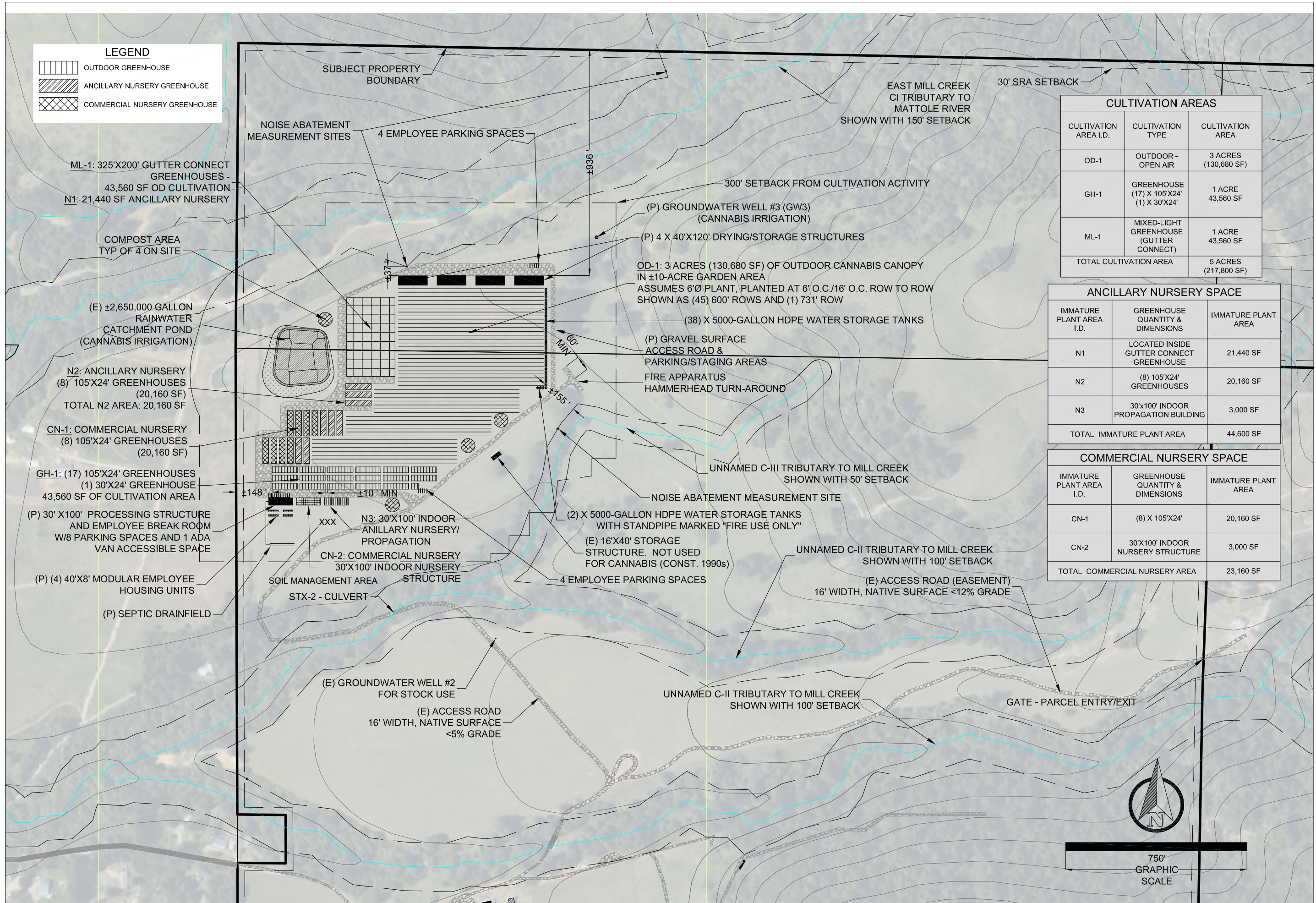
NO.	HISTORY / REVISION	BY	CHK.	DATE

CISCO FARMS, INC.
 MERGED PROPERTY APNs 105-101-011, 104-232-005 & 104-191-001
 1414 CHAMBERS ROAD, PETROLIA, CA 95558

PARTIAL SITE PLAN

DRAWN	ACS
CHECK	GAC
APPROVED	ACS
DATE	06/27/2021
JOB NUMBER	CF-001

SHEET
C2



INVASIVE SPECIES CONTROL PLAN

Assessor Parcel Numbers (APNs):

105 – 101 – 011 & 104 – 232 – 005

Prepared For:

Karl Benemann Construction, LLC

PO Box 1083
Trinidad, CA 95570

Prepared By:

Naiad
Biological
Consulting

www.naiadbiological.com

PO Box 121
Samoa, CA 95564
naiadbiological@gmail.com



Date Prepared:

October 16th, 2020

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X 

Mason London, MS Biology

Naiad Biological Consulting Principal Biologist



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Section 1 Introduction

1.1 Purpose and Need

Section 55.4.12.16 of the Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO), Ordinance 2599, states that “[i]t is the responsibility of a certificate or permit holder to work to eradicate invasive species. As part of any application, the existence of invasive species on the project parcel need to be identified, including the type(s) of invasive plant species, where they are located, and a plan to control their spread. All invasive plant species shall be removed from the cultivation site and associated infrastructure using measures appropriate to the species. Removal shall be confirmed during subsequent annual inspection. Corrective action may be required if invasive species are found to have returned.”

1.2 Biologist’s Qualifications

The Invasive Species Control Plan was prepared by Mason London. Mason is the primary biological consultant of Naiad Biological Consulting. Mason holds a Master of Science Degree in Biology with a concentration in aquatic ecology from Humboldt State University. Mason has 11 years of experience working professionally as a botanist, wildlife biologist, aquatic ecological research scientist, and has instructed ecological field and classroom courses at the university level. Mason has worked in both Northern California and Southern Oregon targeting and eradicating invasive species for nonprofit land stewardship councils and government agencies.

1.3 Invasive Species Information

Not all non-native species are necessarily invasive species. For a species to be considered non-native, it means it has been introduced with human help (intentionally or accidentally) to a new place or new type of habitat where it was not previously found. Whereas, according to the USDA National Invasive Species Information Center, Executive Order 13112 (February 1999), “[a]n invasive species is defined as a species that is 1) non-native (or alien) to an ecosystem under consideration *and* 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.”

The invasive species list used for this Invasive Species Control Plan was derived from the California Invasive Plant Council (Cal-IPC), as required by the Humboldt County Board of Supervisors, in the Mitigation Monitoring and Reporting Program – Proposed Amendments to Humboldt County Code Regulating Commercial Cannabis Activities (Mitigation 3.4-3b: Invasive plant species).

1.4 Assessment and Control Options

A physical survey of the parcels, to determine the scope of the present invasive species, will create a comprehensive starting point for management techniques. Several control options exist for eradicating invasive species; including biological, mechanical and chemical.

1.4.1 Biological Eradication

This option is generally used as a first line of defense for control of invasive species. The reintroduction of native species can, in some cases, create a host for insects and microorganisms which will feed on the invasive species and/or create an environment which will discourage new growth of the invasive plant. Because of this, competitive planting of non-invasive species can help to cultivate an environment which will discourage new growth of invasive plants.

Many invasive species become introduced to an area after a recent disturbance. By using native grasses or plants, in a restoration style planting or seeding, many invasive species will become unable to establish and entrench the exposed soils.

1.4.2 Mechanical Eradication

This option is the most common short-term option for the eradication of invasive species. Hand pulling, or with use of tools such as a weed wrench, can be done easily during certain times of year when the soils are still moist, and roots are easily removed. Depending on the species, it can be important to remove the entire root because some species can regenerate from roots left in the soil. Other species need to be removed before their seeds fully mature in order to not promote aerial spreading of fertile seeds. In some of these cases, the removed plant matter will need to be removed from the property since some seeds are able to mature on a plant even when the plant has been removed from the ground. This method is ideal for populations of invasive plants that are smaller and can be easily managed with hands or hand tools.

For populations of invasive plants that cannot be easily or affectively managed by hand, use of weed whackers, tractors, or cutting tools may be required to eradicate or control the spread of certain species.

1.4.3 Chemical Eradication

This method is considered only as a last resort, if at all, since most commercial cannabis projects are operating under organic and/or natural growing techniques that never include the use of chemicals.

1.5 Project Description

The proposed project, responsible for this Invasive Species Control Plan request, consists of the cultivation of approximately 5 acres of cannabis in two locations within open pasture fields which have been used to graze cattle for the last 150 years or more (Map 2).

Section 2 Methods

2.1 Field Observations and Parcel Description

On July 3, 2020 the parcels of proposed cultivation (APNs: 105-101-011 and 104-232-005) were visited in order to observe the presence of invasive species (Map 1). The project area is located in Section 2, Township 2 South, Range 2 West (S2, T2S, R2W) of the Humboldt Base and Meridian (HBM) and in the Petrolia 7.5-minute USGS quadrangle (Quad code: 4012433). The parcel occurs within the Mill Creek watershed, which is a tributary to the Mattole River (CDFW Region: 1). The center location of the parcels is 40°19'26.9"N 124°15'36.1"W. The elevation range of the parcels is a high elevation of approximately 860 feet (approx. 262 meters) and a low elevation of approximately 225 feet (approx. 68 meters) (Google Earth Pro, 2020).

2.2 Invasive Species Assessment

The Cal-IPC Inventory was used to determine invasive species of concern for the site visit investigation. The *Weed Control in Natural Areas in the Western United States* (UC Davis Weed Research and information Center, 2013) was utilized to determine specific species information and adequate eradication and management methods, as recommended by Cal-IPC.

Section 3 Results

3.1 Parcel Habitat

The main habitat investigated within the parcel for the project area consists of large open upland grassland fields, open pasture for cattle grazing, riparian corridors, watercourses and a potential wetland feature. During the field survey other surrounding habitats on the parcel, described in more detail in *Section 4.1.1*, were also investigated for habitat quality and species presence. A wetland feature and watercourses on the parcel were also investigated and measured for adequate buffered setback from the proposed project site.

3.2 Observed Invasive Species

Many non-native species were observed during the site visit investigation throughout the project sites and the surrounding area, however, only a few invasive species were observed.

The invasive species observed in the parcels where the projects occur, listed on the CAL-IPC inventory, were:

Scientific Name	Common Name	CAL-IPC Invasiveness Rank
<i>Cirsium vulgare</i>	bull thistle	Moderate
<i>Rubus armeniacus</i>	Himalaya blackberry	High
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate
<i>Rumex acetosella</i>	sheep sorrel	Moderate
<i>Cytisus scoparius</i>	Scotch broom	High
<i>Cynosurus echinatus</i>	hedgehog dogtail	Moderate
<i>Briza maxima</i>	big quaking-grass	Limited
<i>Mentha pulegium</i>	pennyroyal	High
<i>Brassica rapa</i>	field mustard	Limited

3.3 Invasive Species Information, Management and Removal Recommendations

3.3.1 Bull thistle (*Cirsium vulgare*)

Cirsium vulgare (Photo 1) was observed in isolated populations throughout the margins of the open field habitat and within portions of the riparian habitat (Map 2). *Cirsium vulgare* is found everywhere in the

United States, favors disturbed areas including rangeland, pastures, forest clear-cuts, roadsides and waste areas, and can also be seen in foothills, dry meadows and riparian areas. This species was introduced from Europe. *Cirsium vulgare* is not palatable to livestock and reduces the forage potential of infested pasture. Once *Cirsium vulgare* becomes established it can easily outcompete native plants.

Cirsium vulgare is considered to have ranking of *Moderate Invasiveness* by the Cal-IPC Inventory. The most feasible method of eradication for this species is by mechanical methods. According to the Weed Report from the Weed Control in Natural Areas in the Western United States, *Cirsium vulgare* can be effectively removed by “[t]illage, hoeing, and hand pulling... as long as they are done before flowering to prevent seed production. Any mechanical or physical control measure that severs the root below the soil surface is very effective...[however], the plant must be cut off below the soil surface and no leaves should remain attached, or the plant will recover.”

The removed plants should be bagged up and removed from the property to make sure plant material and fertile seeds do not promote repropagation.

3.3.2 Himalaya blackberry (*Rubus armeniacus*)

Rubus armeniacus (Photo 2) is common throughout the western United States and favors disturbed, open, moist sites. This species originally came from Eurasia and is a highly competitive plant with a growth form that allows it to quickly crowd out native species. Its thickets have dense canopies allowing little light penetration and reducing the growth of understory plants. This species is given the ranking of *High Invasiveness* by the Cal-PIC Inventory.

According to the Weed Report, from the Weed Control in Natural Areas in the Western United States, “[h]and pulling can be an effective control method for small populations. To successfully control populations with mechanical removal, it is important to remove the canes, roots and the root crowns to prevent resprouting. A Pulaski, mattock or similar device can be used to remove plants. Bulldozing may cause resprouting and can spread the weed by fragmenting roots and stems.”

This species was observed in throughout the riparian habitat. If the applicant plans to attempt to eradicate or control the dominate presence of *Rubus armeniacus*, it is important to remove the entire plant since, according to the Weed Report, “[c]utting and removing only the aboveground biomass will result in the stimulated growth of root sprout. The root sprouts must be controlled and repeated cutting of the above-ground biomass during flowering time will exhaust the root stores.”

3.3.3 Italian thistle (*Carduus pycnocephalus*)

Carduus pycnocephalus (Photo 3) was observed in isolated populations throughout the of the open field habitat and the riparian habitat. It is likely that this species exists in greater number throughout the parcel, but was not observed during the site visit. *Carduus pycnocephalus* is native to Europe and the Mediterranean region, and can be found throughout the western United States in disturbed open sites, roadsides, pastures, annual grasslands, and waste areas. This species is given the ranking of *Moderate Invasiveness* by the Cal-PIC Inventory.

The recommended mechanical eradication, by the Weed Report from the Weed Control in Natural Areas in the Western United States, for this species is to remove when they are small “by cutting.” To be effective with this method, one must “...use a sharpened shovel at the top of the root crown. Grubbing hoes must cut the plants 2 to 4 inches below ground level to prevent resprouting from dormant axillary buds.” It is also noted that “[m]owing the plant during flowering can greatly reduce seed production, though a single mowing is seldom sufficient due to the wide differences in the maturity of plants in a natural population.” If one does plan to control by mowing, this process should “wait till plants bolt and are about the flower.”

3.3.4 Sheep sorrel (*Rumex acetosella*)

Rumex acetosella (Photo 4) was observed throughout the grazed field habitats. *Rumex acetosella* is originally native to Europe and favors agricultural lands, pastures, fields, roadsides, garden, landscaped areas, grasslands and open grazed lands. It can be found invading habitats such as riparian corridors, moist woodlands, forest margins, coastal habitats and a wide variety of disturbed sites. *Rumex acetosella* occurs nearly worldwide and can displace native grasses and forbs. This species is given the ranking of *Moderate Invasiveness* by the Cal-PIC Inventory.

The mechanical eradication that is recommended by the Weed Report from the *Weed Control in Natural Areas in the Western United States*, is to clarify remove by hand. The report explains that controlling this species “...can be difficult because of its creeping rhizomes and long-lived seeds, but is most effective when infestations are caught early.” The report points out that “[p]lants are too short to be affected by mowing...” so the applicant may need to administer repetitive hand pulling to prioritize eradication efforts and assure that *Rumex acetosella* does not recolonize the grazed fields.

3.3.5 Scotch broom (*Cytisus scoparius*)

Cytisus scoparius (Photo 5) was found throughout the parcel at the perimeter of the forested openings and in the riparian areas. *Cytisus scoparius* is common throughout the western United States and favors

grasslands, shrublands, oak woodlands, forest margins, coastal habitats, riparian corridors; disturbed sites such as roadsides, pasture, gravelly floodplains, burned areas, cleared forests and is typically found in mountain regions and cool coastal areas with dry summers. It is a fast-growing deciduous shrub that can reach 5 to 10 ft tall. *Cytisus scoparius* forms dense stands that most wildlife finds impenetrable and unpalatable. These dense stems limit regeneration of most other plant species and the accumulation of woody biomass creates a dangerous fire hazard. This species is given the ranking of *High Invasiveness* by the Cal-PIC Inventory.

According to the Weed Report, from the *Weed Control in Natural Areas in the Western United States*, “[s]eedlings and small shrubs can be hand pulled. For larger established shrubs, a weed wrench or other woody weed extractor can be used. Extract the entire root or resprouting will occur.” The report goes on to point out that the “[b]est results are achieved when soil is moist...” but the technician completing this mechanical control needs to be careful because “[d]isturbing the soil can stimulate the seedbank.”

Given the abundant population of *Cytisus scoparius* it is recommended that the applicant focuses on the control of the individuals at the margins of forested areas in order to keep the spread of this population at bay. The Weed Report points out that “[c]utting broom off before it flowers will reduce seed production and will deplete the plant’s energy reserves...” and that “[r]sprouting is common after treatment, but can be reduced by cutting broom at the beginning of the dry season.” It is recommended that the applicant follows these methods of control in order to keep the spread of *Cytisus scoparius* at bay.

3.3.6 Hedgehog dogtail (*Cynosurus echinatus*)

Cynosurus echinatus (Photo 6) was observed in a few patches in grazed pastures, along the roadsides and within the riparian habitat (Map 2). *Cynosurus echinatus* is a grass (family *Poaceae*) that flowers June through August and can be found at lower elevations along trails and disturbed areas in both open and wooded areas. This species is given the ranking of *Moderate Invasiveness* by the Cal-PIC Inventory.

The recommended mechanical eradication, by the Weed Report from the *Weed Control in Natural Areas in the Western United States*, for this species is to mow, but must be done “done before seed sets in the early summer.” The report goes on to explain how “[h]and pulling of annual grasses such as hedgehog dogtail may be effective early in spring before seed set, but is very labor-intensive and is only used on small infestations.” It is also important to “[m]inimize soil disturbance when hand pulling to minimize new seed germination.”

3.3.7 Big quaking-grass (*Briza maxima*)

Briza maxima (Figure 7) was observed throughout the open field habitat (Map 2). It is likely that this species exists in greater numbers throughout other habitats on the parcel, but was not observed during the site visit. *Briza maxima* is a winter annual grass and is found in coastal ranges throughout of California. This species is given the ranking of *Limited Invasiveness* by the Cal-PIC Inventory.

The mechanical eradication that is recommended by the Weed Report from the *Weed Control in Natural Areas in the Western United States*, is to till or pull the species “just before viable seed production.” This is the only mechanical control recommendation that is considered to be “excellent,” meaning that in general its success in eradicating the species is greater than 95%. Other “good” mechanical control recommendations, meaning its success of eradication is 80-95%, include grazing, prescribed burning, and mowing or cutting “...before seed drop[s].”

3.3.8 Pennyroyal (*Mentha pulegium*)

Mentha pulegium (Photo 8) was observed in few numbers in the open pastures and within the riparian areas (Map 2). *Mentha pulegium* is common as an obligate wetland indicator species in seasonally inundated soils of valleys and bottomlands, usually below 1,640 feet elevation. The presence of these species is not always representative of a wetland. This parcel is located within the USACE Land Resource Region A (LRR:A) within the western mountains, valleys and coast region. LRR:A, or the northwest forests and coast sub region, often experiences frequent and heavy rainfall events that create ample opportunities for wetland vegetation to propagate.

Even though pennyroyal is considered uncommon in much of California, it occurs in the sierra foothills, Central Valley, and most coastal counties from the Mexican border to Oregon. Pennyroyal favors disturbed sites, seeps, stream sides, vernal pools, marches and ditches. This species is given the ranking of *High Invasiveness* by the Cal-PIC Inventory.

According to the Weed Report, from the *Weed Control in Natural Areas in the Western United States*, “[p]ennyroyal infestations can be suppressed by manual removal of individual plants and small patches before flowering... below-ground reproductive tissues should be severed approximately 3 inches below the soil surface when the plants are beginning to bolt.”

The report goes on to explain that “[t]illage can be an effective control strategy for rosettes and bolting plants.” This species should be combated in order to prevent any potential spreading, though is probably not a major concern due to its isolation to the mesic habitat.

It is recommended that this species be left alone in its current habitat in order to not disturb the wetland by any irradiation measures.

3.3.9 Field mustard (*Brassica rapa*)

Brassica rapa (Photo 9) was observed in a few patches along the parcel's roads and within the riparian area. It is likely that this species exists in greater number throughout the margins of the open fields, but was not observed during the site visit. *Brassica rapa* is native to Europe and the Mediterranean region, and can be found throughout the western United States in disturbed open sites, roadsides, pastures, annual grasslands, and waste areas. This species is given the ranking of *Limited Invasiveness* by the Cal-PIC Inventory.

The recommended mechanical eradication, by the Weed Report from the Weed Control in Natural Areas in the Western United States, for this species is to mow or cut and that "cutting at soil surface should be sufficient." The report also mentions other successful forms of non-chemical control being: "grazing, prescribed burning, tillage and grubbing, digging or hand pulling." For the applicant's cultivation plan, mowing, cutting, tilling or hand pulling would seem to be the most realistic and successful forms of control.

Section 4 Conclusion and Recommendations

The applicant can control the spread of the invasive species previously listed if the recommended mitigation and control methods are followed. If the applicant follows the “early detection rapid response” approach before the plants can flower and seed, the current state of the cultivation area should be easily treatable. Due to the clustering of the invasive species observed within the proposed project site locations, and given that many of these species do not favor the surrounding forested habitat, the applicant can halt the invasion of these species spreading throughout the surrounding habitats if action is taken.

Section 5 References

California Invasive Plant Council (Cal-IPC) Inventory: <https://www.cal-ipc.org/plants/inventory/>. Accessed September 2020.

Easter, J (2004). California Vegetation/Wildlife Habitat Regions. Accessed September 2020

Ordinance No. 2599, amending sections 314-55.4, 314-55.3.11.7, 314-55.3.7 and 314-55.3.15 of Chapter 4 of Division 1 of Title III of the County Code (CCLUP for Areas Outside the Coastal Zone). Board of Supervisors, County of Humboldt, State of California, May 2018. Accessed June 2020.

Weed Control in Natural Areas in the Western United States. UC Davis Weed Research and Information Center, 2013. Accessed January 2020.

Appendix A

Photo Documentation

APNs: 105 – 101 – 011 & 104 – 232 – 005

Invasive Species Control Plan

July 2020



Photo 1. A dead bull thistle (Cirsium vulgare) within one of the riparian corridors.



Photo 2. Himalaya blackberry (Rubus armeniacus) observed along the riparian area of the most southern Class II watercourse.



Figure 3. Italian thistle (*Carduus pycnocephalus*) circled in red.



Figure 4. The red buds of sheep sorrel



Figure 5. Scotch broom (*Cytisus scoparius*) circled in red.



Figure 6. Hedgehog dogtail (*Cynosurus echinatus*) inflorescences.



Figure 7. Big quaking-grass (*Briza maxima*) circled in red.



Figure 8. Pennyroyal (*Mentha pulegium*) circled in red.



Figure 9. Field mustard (Brassica rapa) with the yellow flowers.

Appendix B

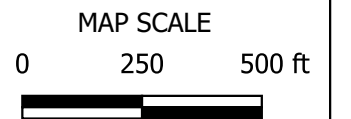
Maps

APNs: 105 – 101 – 011 & 104 – 232 – 005













Invasive Species Control Plan

July 2020

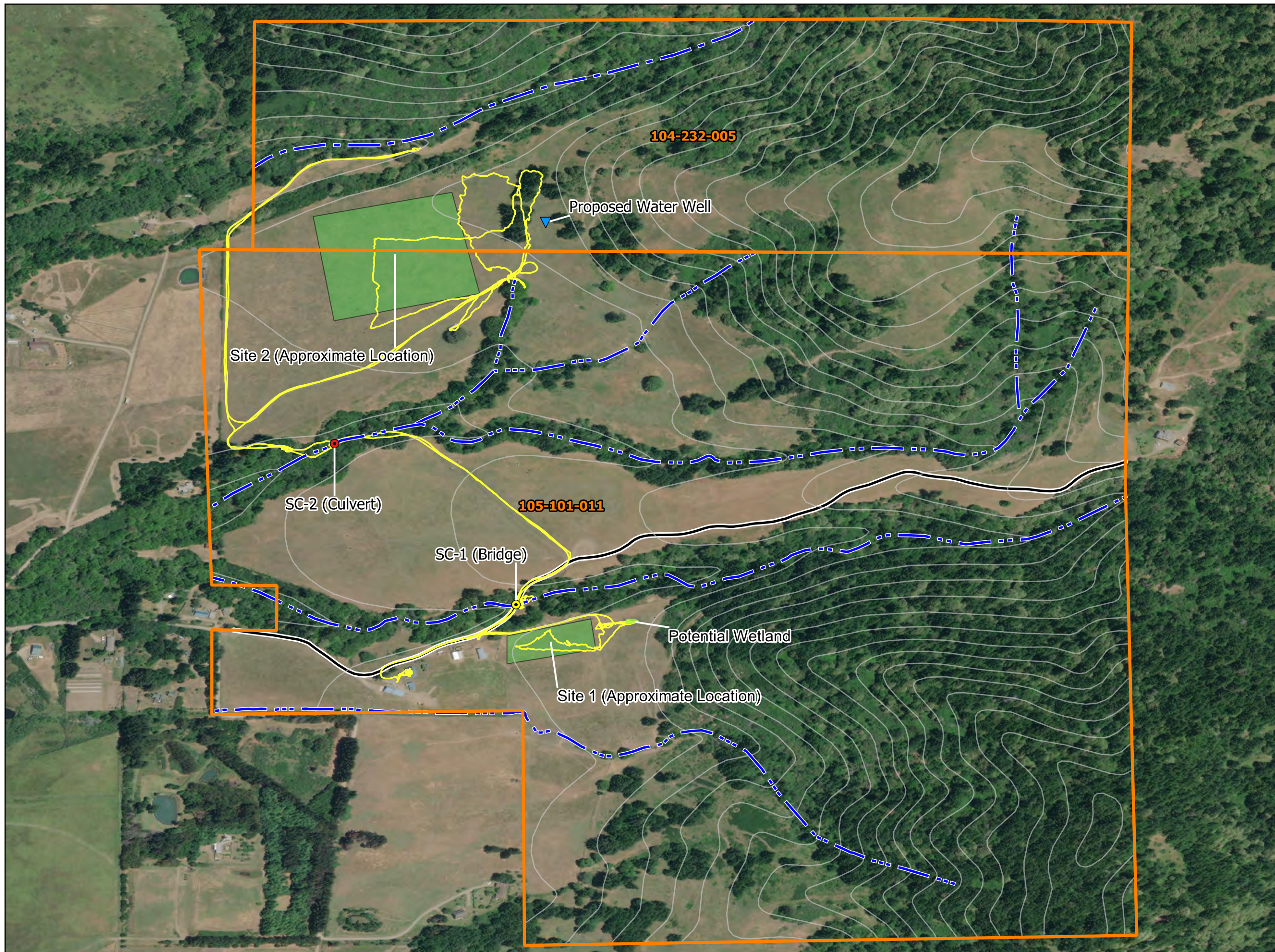
**MAP 1.
BENEMANN
INVASIVE
SPECIES
SURVEY PATH
MAP**



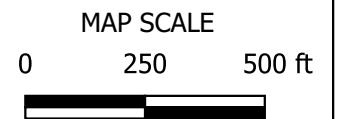
LEGEND

-  Humboldt County APN
-  USGS 40-ft Contours
-  Access Road
-  Well
-  Bridge Stream Crossing
-  Culverted Stream Crossing
-  Mill Creek (Class I)
-  Class II Stream
-  Class III Stream
-  Potential Wetland
-  Potential Cultivation Site
-  Biological Survey Path (7/3/2020)













LOCATED AT:
1414 CHAMBERS ROAD
PETROLIA, CALIFORNIA



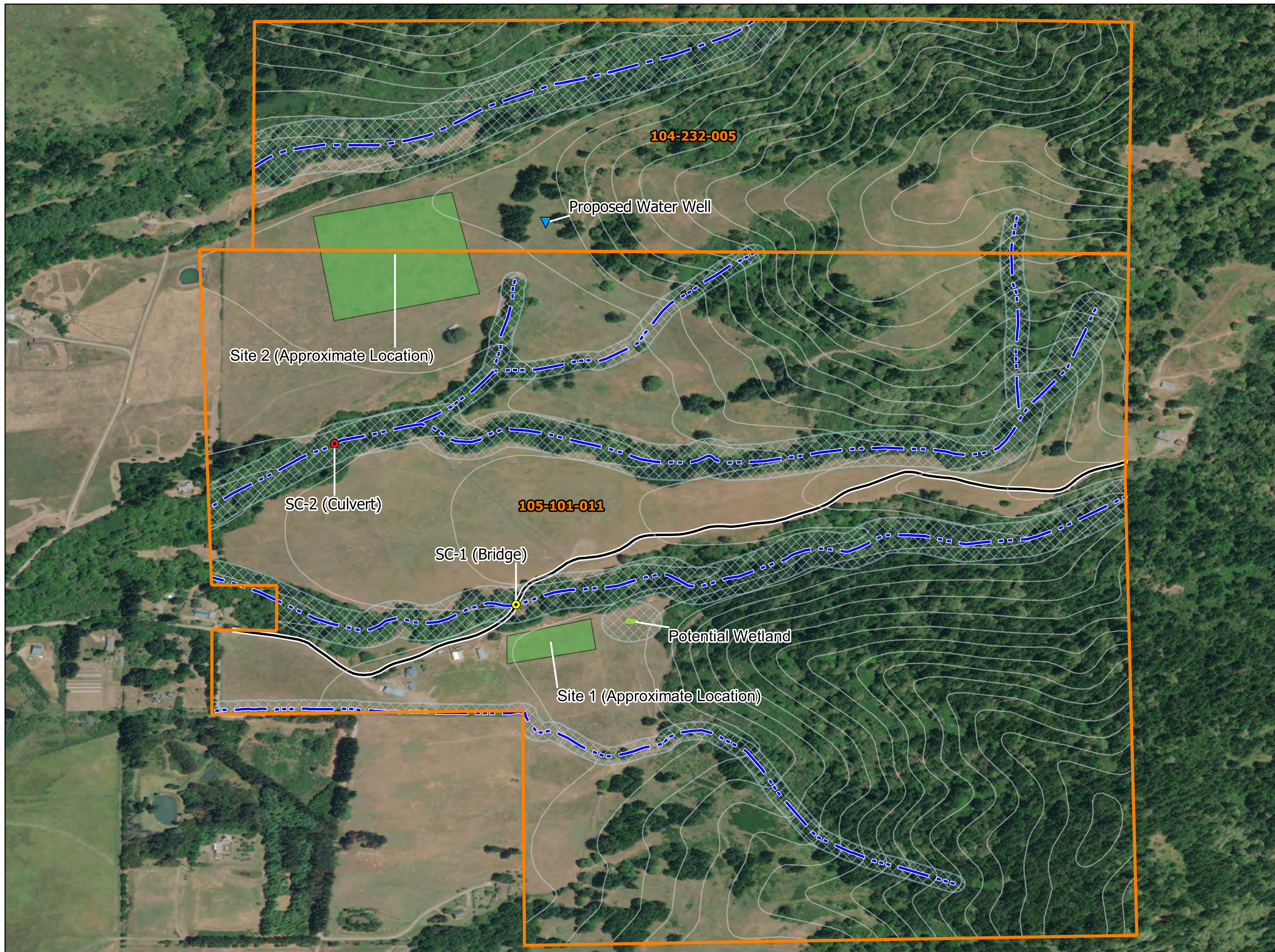
**MAP 2.
BENEMANN
BIOLOGICAL
RESOURCE
ASSESSMENT
SITE MAP**



LEGEND

-  Humboldt County APN
-  USGS 40-ft Contours
-  Access Road
-  Well
-  Bridge Stream Crossing
-  Culverted Stream Crossing
-  Mill Creek (Class I)
-  Class II Stream
-  Class III Stream
-  Potential Wetland
-  Aquatic Resource Buffer
-  Potential Cultivation Site

LOCATED AT:
1414 CHAMBERS ROAD
PETROLIA, CALIFORNIA



GOLDEN EAGLE SURVEY REPORT

Assessor Parcel Number (APN):
105 – 101 – 011 & 104 – 232 – 005

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Petrolia, CA 95558

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February 15th, 2022

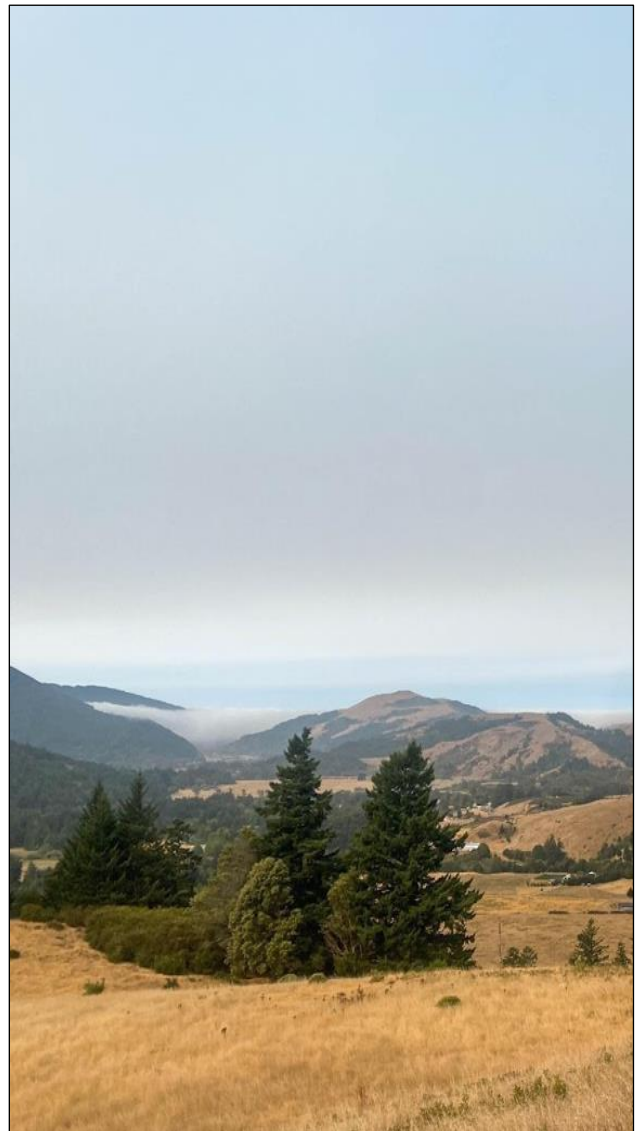


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1.0 SUMMARY OF FINDINGS

In August of 2021 and February of 2022, ground-based eagle and raptor nest surveys were completed following the protocol outlined by the American Eagle Research Institute in 2010 (Driscoll 2010).

No Golden eagles were observed soaring or foraging and no evidence of historical or current Golden eagle nests were observed. Limited prey availability was observed, suggesting that the proposed project site offered few sources of prey for Golden eagles. Based on the results of all three surveys, the project area has not been occupied historically or currently by Golden eagles. Due to the limited prey availability, it seems unlikely Golden eagles will occupy the property in the future, therefore given current mitigation measures, the project will likely have no impact to Golden eagles currently, or in the foreseeable future.

2.0 INTRODUCTION

In August of 2021 and February of 2022, ground-based eagle and raptor nest surveys were completed following the protocol outlined by the American Eagle Research Institute in 2010 (Driscoll 2010). The survey area was comprised of two general locations, the site where construction is proposed, and an observation lookout point with a panoramic view of the proposed project site and the adjacent parcels (Photo 1). These surveys occurred over two parcels, APN 105-101-011 and 104-232-005¹. The overall topography of the parcel and surrounding land is steep with multiple ridgelines and drainages with sections of generally flat topography throughout the floodplains. The dominant habitats in the survey area are coniferous forests, mixed conifer and oak forests, coastal prairies, riparian, agricultural and rural development.

Golden eagles (*Aquila chrysaetos*) are known to occur in Humboldt County but are rare to uncommon residents and breeders generally observed in southern Humboldt County (Harris 2005, Hunter et al. 2005). Golden eagles are protected under the Bald and Golden Eagle Protection Act (Eagle Act) and Migratory Bird Treaty Act. Both of these acts prohibit take, which is defined as an attempt to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb. Golden eagles are upper-trophic aerial predators and commonly eat small to mid-sized mammals, birds and reptiles. Humboldt County has limited open and semi-open habitat, therefore Golden eagles' nest in low densities in coniferous habitats, surrounded by open spaces such as pasture-land and coastal prairies. Golden eagle nesting, roosting and foraging habitat occurs throughout the survey area. The surrounding coniferous forest and mixed conifer and oak forests are potential nesting and roosting habitats. The grassland, riparian and agricultural lands are potential foraging habitats.

Golden eagles are large-bodied raptors, as a result, breeding and raising young takes a large investment of energy and time. Generally, courtship begins in December and January. Nest building and egg laying begins in January and continues until March, and hatching and raising young occurs from April to June. Once juveniles have fledged, they will continue to be fed and taught to hunt until late November. Surveys for historical and current nests were conducted during this time period in order to accurately predict occupancy and habitat usage.

An initial eagle and raptor nest survey was conducted in August of 2021 to identify historical nests. This was followed by a prey availability survey to estimate available resources. A second eagle and raptor nest survey was conducted in February of 2022 to identify current nesting, roosting or foraging individuals. No evidence of nesting eagles were found during any of these surveys.

¹ See associated Biological Resource Assessment for complete Study Area site description.

3.0 METHODS

Surveys were conducted in accordance with the California Department of Fish and Wildlife guidance protocol or the Protocol for Golden Eagle Occupancy, Reproduction, and Prey Population Assessment (Driscoll 2010). Three ground-based surveys were conducted by two experienced avian biologists including two nesting surveys and one prey availability survey. In August of 2021, the preliminary eagle nesting survey and prey availability survey was conducted by Phil Johnston, a contracted professional Wildlife Tracker and Researcher. Phil received his BS in Wildlife Management and Conservation from HSU and is currently employed as a Mountain Lion and Fisher Biologist for California Department of Fish and Wildlife. Phil has extensive experience working with carnivores in Northern California and is also trained to do Northern Spotted Owl Surveys, Willow Flycatcher surveys, nesting bird surveys and Peregrine Falcon nest surveys.

The follow-up nesting survey was conducted in February of 2022 by Erin Phillips, a contracted Wildlife Biologist. Erin received her BS in Conservation Biology/Applied Vertebrate Ecology from Humboldt State University in 2017 and is currently employed as an Aquatics Biologist for Green Diamond Resource Company. Erin has 10 years of experience conducting a variety of ornithological surveys such as nesting bird surveys, area searches, and migration censuses. She is a certified NABC bird bander and has been trained to conduct Threatened and Endangered Species Surveys for Marbled Murrelets, Spotted Owls, and Willow Flycatcher. She can identify local species by ear and sight.

The Golden Eagle Predicted Habitat map from the California Department of Fish and Wildlife BIOS was also utilized as a preliminary tool to assess the project areas potential likelihood to support Golden eagles (Map 1).

3.1 Nesting Surveys and Prey Availability Survey

Nesting Surveys

The preliminary nesting survey was conducted on the morning of August, 22nd 2021 from 08:30 am until 12:30 pm. The project area was surveyed for soaring and perched golden eagles from a nearby hill (393328, 4464949) approximately 700 meters from the proposed project site with an aerial view of the project site, the rest of the parcel and adjacent land. Visibility was clear and raptors could be identified up to 2.5 miles away. Using binoculars and a 600mm lens, mature firs and oaks that were quality habitat for golden eagle nests, were closely inspected.

The secondary nesting survey was conducted on February 6th, 2022, the project area and adjacent land were surveyed for nesting, soaring, and roosting Golden eagles and other raptor species. The survey was conducted from 07:20 am until 12:00 pm on the same nearby hill (393328, 4464949) as the previous survey (Photo 2). There was little wind, no fog, and clear visibility. Potential nesting trees, power poles, powerlines, and fence posts were consistently scanned for perched eagles and raptors using Nikon Prostaff 5 binoculars and a spotting scope. Surrounding the project area, mature Douglas firs and oaks were identified as potential nesting trees (Photo 3). These trees were consistently searched for evidence of historical or current nests, roosting raptors, and perched raptors. Following the surveys, the base of potential nesting trees were searched for whitewash, pellets, and other evidence of raptor nests.

Prey Availability Survey

The 10-acre meadow outlined for development for the proposed project was surveyed for presence/abundance of important golden eagle prey species, focusing on black-tailed jackrabbits and California ground squirrels (Photo 4). Black-tailed jackrabbits defecate while feeding and piles of pellets

accumulate where the animals spend time. Assessing density from pellet counts is complicated, but transects for pellets are effective in determining presence/absence. California ground squirrels make conspicuous burrows wherever they live, and counting burrows has been used as a method for estimating population density. The 10-acre project area was surveyed in 27 transects totaling 3.8 miles, and the transects were conducted by a Cybertracker Certified “Track and Sign Specialist” with expertise in identifying and interpreting wildlife sign. The surveyor walked slowly and studied the ground for ground squirrel burrows and jackrabbit pellets.

4.0 RESULTS

Each ground-based nesting survey consisted of approximately 4 hours of survey time. No Golden eagles were observed soaring or foraging and no evidence of historical or current Golden eagle nests were observed. Limited prey availability was observed, suggesting that the proposed project site offered few sources of prey for Golden eagles. Furthermore, the map of Golden Eagle Predicted Habitat, the entire project area was ranked with medium predictability to harbor golden eagle habitat (Map 1).

Based on the results of all three surveys, the project area has not been occupied historically or currently by Golden eagles. Due to the limited prey availability, it seems unlikely Golden eagles will occupy the property in the future, therefore given current mitigation measures, the project will likely have no impact to Golden eagles currently, or in the foreseeable future.

4.1 Nesting Surveys and Prey Availability Survey

Nesting Surveys

During the preliminary survey, the surveyor identified a pair of red-tailed hawks, a pair of red-shouldered hawks, a pair of ravens, and dozens of turkey vultures from this observation point (Photo 5). No golden eagles were observed at any time, and no evidence of eagle nests of any kind was observed. The pairs of *Buteo* hawks observed were engaged in territorial nesting behavior and were quite obvious in their activities through vocalizations and soaring. The habitat within one mile of the proposed project area contains many mature fir, redwood and oak trees with decadent features which would be suitable for a golden eagle nest, but there is no evidence of nesting eagles at the time of this report.

During the secondary nesting survey, the surveyor identified three Red-tailed Hawks, two Red-shouldered Hawks, two American Kestrels, and eight Turkey Vultures. None of the raptors identified were in pairs or displaying nesting or breeding behavior. One adult male American Kestrel chased a second juvenile American Kestrel away from the property boundary. There were no female Kestrels observed and the adult male Kestrel was not displaying nesting or pair-bonding behavior. There were many groups of Steller's Jays, Common Ravens, and American Crows. These species are known to exhibit "mobbing" behavior towards larger-bodied raptors such as eagles, none of this behavior was observed. A snag with a family of woodpeckers was observed directly next to the tree that the adult male Kestrel occupied sporadically. Kestrels are cavity nesters and will normally display territorial behaviors around woodpeckers and other cavity nesters. None of this behavior was observed. No raptor nests, pellets, or whitewash were detected. There were at least ten potential nesting trees an average of 600 meters from the project area. Each tree had wide branches and an average DBH of 55 and a height of 100 ft. All species in Table 1. were identified visually and auditorily throughout the duration of the survey.

Prey Availability Survey

The transects encountered zero jackrabbit pellets and zero ground squirrel burrows. The lack of ground squirrel burrows decisively indicates a complete absence of ground squirrels from the project area. Pellets are more difficult to observe, and easier to overlook, but the lack of presence on the transects strongly indicates either very low jackrabbit presence/use or absence all together. Pocket gopher sign was abundant in the meadow, as was sign of at least one American badger hunting pocket gophers. Pocket gophers are not considered an important part of Golden eagle diet. California quail and wild turkey sign was present in and around the project area, and both species are considered prey for Golden eagles. No small mammals were visibly observed during the transects.

Table 1. Bird species identified and their current Federal and State Conservation Status observed on February 6th 2022 within the parcel and on adjacent land.

Common Name	Scientific Name	State Status (CESA)	Federal Status (ESA)
Red-shouldered Hawk	<i>Buteo lineatus</i>	Least Concern	Least Concern
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Least Concern	Least Concern
Turkey Vulture	<i>Cathartes aura</i>	Least Concern	Least Concern
American Kestrel	<i>Falco sparverius</i>	Least Concern	Least Concern
Common Raven	<i>Corvus corax</i>	Least Concern	Least Concern
American Crow	<i>Corvus brachyrhynchos</i>	Least Concern	Least Concern
Stellar's Jay	<i>Cyanocitta stelleri</i>	Least Concern	Least Concern
California Scrub Jay	<i>Aphelocoma californica</i>	Least Concern	Least Concern
Red-shafted Flicker	<i>Colaptes auratus</i>	Least Concern	Least Concern
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	Least Concern	Least Concern
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Least Concern	Least Concern
American Robin	<i>Turdus migratorius</i>	Least Concern	Least Concern
California Quail	<i>Callipepla californica</i>	Least Concern	Least Concern
Greater Yellowlegs	<i>Tringa melanoleuca</i>	Least Concern	Least Concern
Wrentit	<i>Chamaea fasciata</i>	Least Concern	Least Concern
Black Phoebe	<i>Sayornis nigricans</i>	Least Concern	Least Concern
Western Bluebird	<i>Sialia mexicana</i>	Least Concern	Least Concern
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	Least Concern	Least Concern
Song Sparrow	<i>Melospiza melodia</i>	Least Concern	Least Concern
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	Least Concern	Least Concern
Dark-eyed Junco	<i>Junco hyemalis</i>	Least Concern	Least Concern
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Least Concern	Least Concern
Hutton's Vireo	<i>Vireo huttoni</i>	Least Concern	Least Concern
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Least Concern	Least Concern
European Starling	<i>Sturnus vulgaris</i>	Least Concern	Least Concern
Anna's Hummingbird	<i>Calypte anna</i>	Least Concern	Least Concern

5.0 LITERATURE CITED

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Hunter, J. E., D. Fix, G. A. Schmidt, and J. C. Power. 2005. Atlas of the breeding birds of Humboldt County, California. Redwood Region Audubon Society, Eureka, California.

APPENDIX A
PHOTO DOCUMENTATION
GOLDEN EAGLE SURVEY REPORT

Assessor Parcel Number (APN):
105 – 101 – 011 & 104 – 232 – 005



Photo 1. View from observation hill (393328, 4464949).

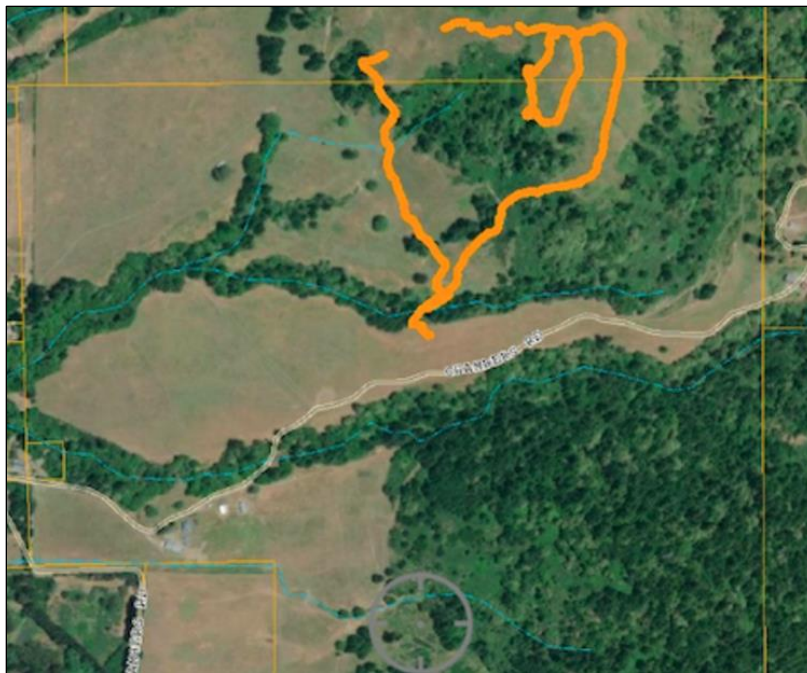


Photo 2. February 6, 2022 Nesting survey GPS tracks.



Photo 3. Potential nesting trees, Douglas firs.



Photo 4. GPS tracks from Prey Availability Survey August 22, 2021.



Photo 5. Turkey vultures fly from 2 miles away during preliminary survey.



Photo 6. Pocket Gopher signs in project area.





APPENDIX B MAP

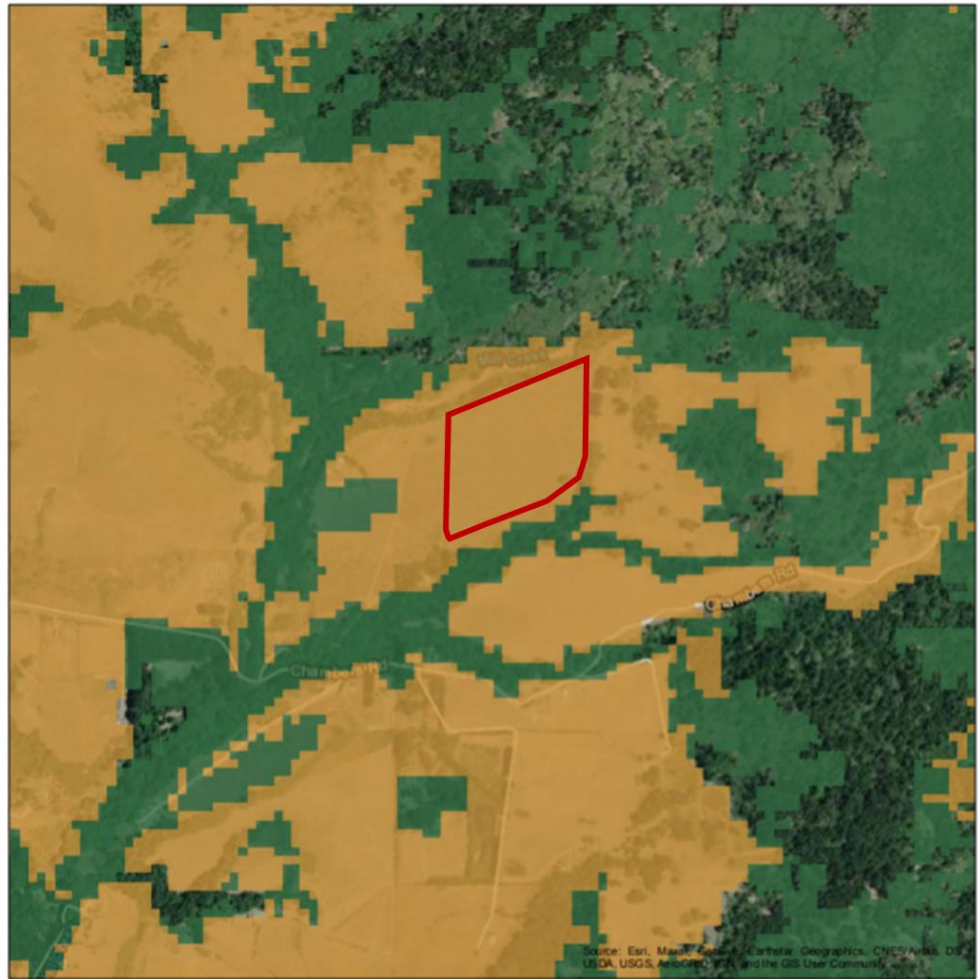
GOLDEN EAGLE SURVEY REPORT

Assessor Parcel Number (APN):
105 – 101 – 011 & 104 – 232 – 005

Map of Golden Eagle Predicted Habitat within Project Area

Golden Eagle Predicted
Habitat - CWHR B126
[ds2096]

-  Low
-  Medium
-  High
-  Approx. Boundary
of the project area



HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS
ROAD EVALUATION REPORT

PART A: *Part A may be completed by the applicant*

Applicant Name: Cisco Farms, Inc. APN: 104-232-005, 104-191-001
& 105-101-011 (one legal
Planning & Building Department Case/File No.: _____ parcel)

Road Name: Chambers Road (complete a separate form for each road)

From Road (Cross street): Mattole Road

To Road (Cross street): Subject Property Gate/Access Point

Length of road segment: 1.1 miles Date Inspected: 11/18/2020

Road is maintained by: County Other _____
(State, Forest Service, National Park, State Park, BLM, Private, Tribal, etc)

Check one of the following:

Box 1 The entire road segment is developed to Category 4 road standards (20 feet wide) or better. If checked, then the road is adequate for the proposed use without further review by the applicant.

Box 2 The entire road segment is developed to the equivalent of a road category 4 standard. If checked, then the road is adequate for the proposed use without further review by the applicant.

An equivalent road category 4 standard is defined as a roadway that is generally 20 feet in width, but has pinch points which narrow the road. Pinch points include, but are not limited to, one-lane bridges, trees, large rock outcroppings, culverts, etc. Pinch points must provide visibility where a driver can see oncoming vehicles through the pinch point which allows the oncoming vehicle to stop and wait in a 20 foot wide section of the road for the other vehicle to pass.

Box 3 The entire road segment is not developed to the equivalent of road category 4 or better. The road may or may not be able to accommodate the proposed use and further evaluation is necessary. Part B is to be completed by a Civil Engineer licensed by the State of California.

The statements in PART A are true and correct and have been made by me after personally inspecting and measuring the road.

Signature

3/13/21

Date

Andy Sorter, P.E.

Name Printed

Important: Read the instructions before using this form. If you have questions, please call the Dept. of Public Works Land Use Division at 707.445.7205.



TO: County of Humboldt, Department of Public Works
County of Humboldt, Planning and Building Department

FROM: Andy Sorter, P.E., Principal Engineer, OurEvolution Energy & Engineering (OE)

RE: ROAD EVALUATION – Supplemental Information - Chambers Road from Access Point/Property Boundary of Subject Property to Intersection of Chambers Road and Mattole Road

SUBJECT PROPERTY - 1414 Chambers Road, Petrolia, CA 95558, APNs 105-101-011, 104-232-005 & 104-191-001 (constitute one legal parcel)

Completed for Cisco Farms, Inc.

Date: March 13, 2021

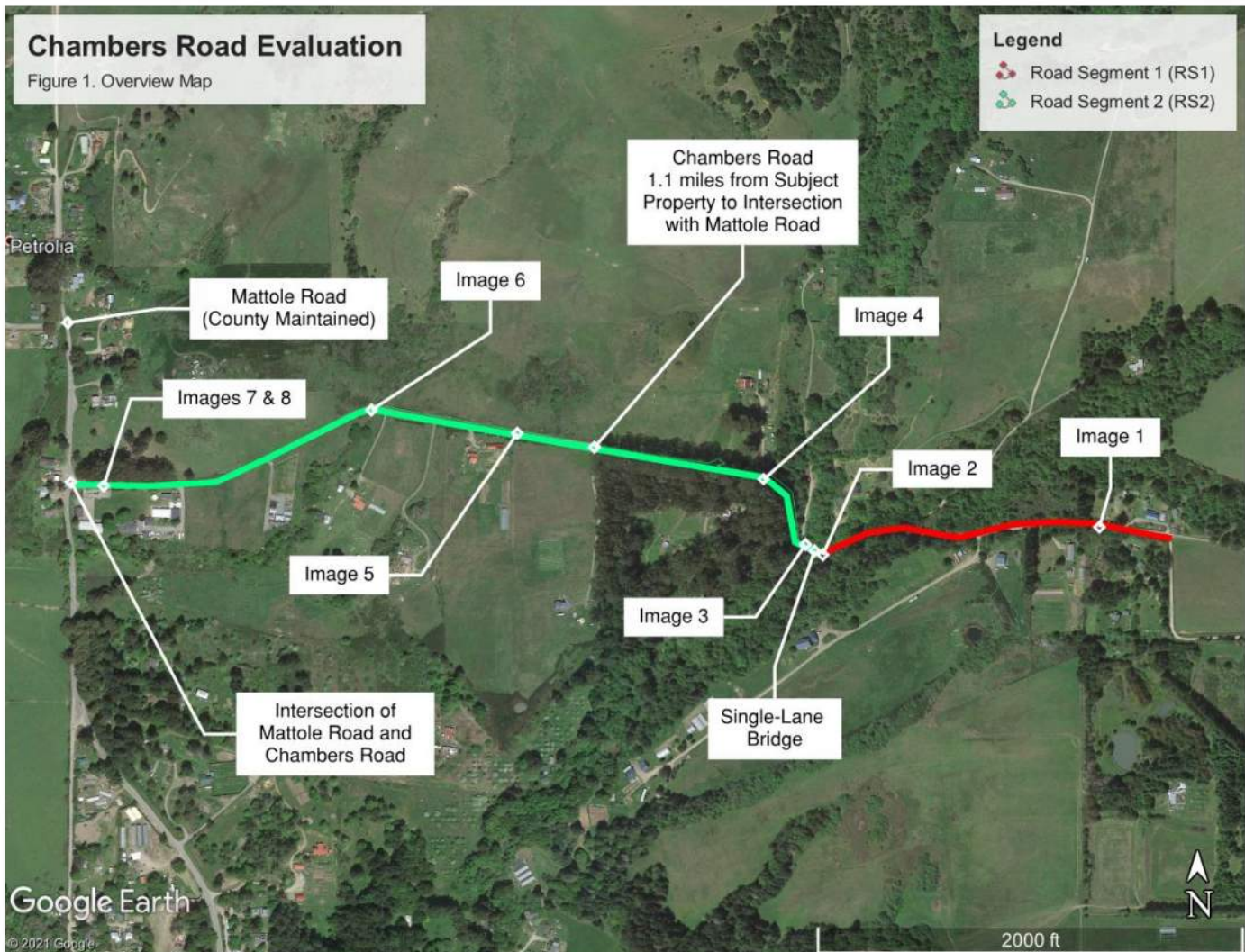


Figure 1. Chambers Road Evaluation – Overview Map

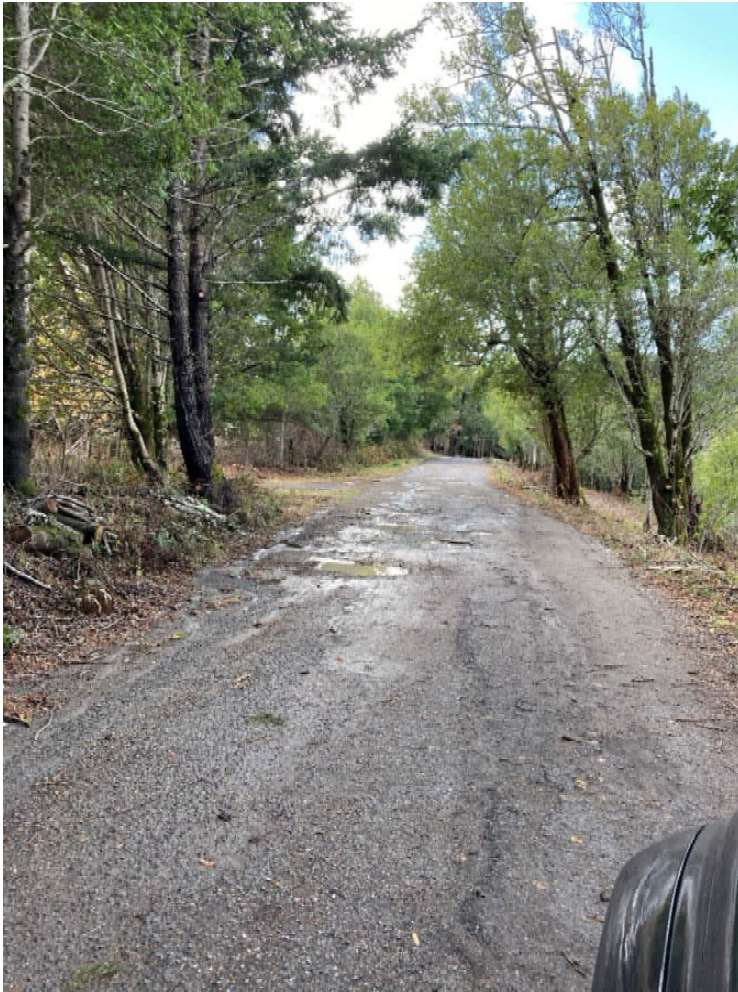


Image 1. RS1 – Representative of RS1 conditions (looking west). Details asphalt road surface, 20' average road width, crowned geometry and fair road drainage, average slopes <5% - max 10%.



Image 2. Single-Lane Bridge (looking west). Note large turnout at opposite end of bridge.



Image 3. Single-Lane Bridge (looking east). Note large turnout at opposite end of bridge.



Image 4. Representative of RS2 conditions (looking west). Details asphalt surface, 20'+ average road width, shoulders, turnouts, crowned geometry with fair drainage, average slopes <5% - max <12%.



Image 5. Representative of RS2 conditions (looking west). Details asphalt surface, 20'+ average road width, shoulders, turnouts, crowned geometry with fair drainage, average slopes <5%.



Image 6. Representative of RS2 conditions (looking west). Details asphalt surface, 20'+ average road width, shoulders, turnouts, crowned geometry with fair drainage, average slopes <5%.



Image 7. Representative of RS2 conditions (looking west) at intersection of Chambers Road and Mattole Road. Details asphalt surface, 25'+ average road width, shoulders, turnouts, crowned geometry with fair drainage, average slopes <5%.

Image 8. Representative of RS2 conditions (looking east) near intersection of Chambers Road and Mattole Road. Details asphalt surface, 25'+ average road width, shoulders, turnouts, crowned geometry with fair drainage, average slopes <5%.

August 20, 2021

RE: Septic Feasibility – Cisco Farms, Inc., 1414 Chambers Road, Petrolia, CA 95558 (APNs 105-101-011, 104-232-005 & 104-191-001)

To Whom It May Concern:

As part of our work in developing conceptual site development plans for Cisco Farms, Inc., OurEvolution engineers (OE) oversaw excavation of Onsite Wastewater Treatment System (OWTS) “test pits” at the location of proposed primary and reserve leachfields. No groundwater or impermeable layers were observed in pits that were excavated to a minimum depth of 10’. As determined in coordination with Humboldt County Department of Environmental Health, the location of the proposed OWTS was outside of any Variance Prohibition Area.

In addition to the onsite inspection of the proposed OWTS dispersal locations, OE collected soil samples in the “most restrictive soil group encountered in the 36 inch soil column beneath the [proposed] trench bottom”. These samples were submitted to North Coast Laboratories LTD. for bulk density and particle size analyses (BDPSA). Results of these analyses indicate that Zone 2 soils are present at both the proposed primary (TP-2) and reserve (TP-1) locations (See Attached 5/19/21 North Coast Laboratories LTD Lab Results). According to the Humboldt County Onsite Wastewater Treatment System (OWTS) Regulations and Technical Manual, “Sites where sufficient depths of Zone 2 soils occur may not require percolation testing to complete a dispersal system design. The application rates associated with the soil texture as shown in the table below [OWTS Technical Manual Table 2-Soil Application Rates] can be used to calculate dispersal system size.

It is my opinion, based on personal inspection of the test pits and the results of soils analyses, additional percolation testing is not required and the guidance provided by the OWTS Technical Manual Table 2 in conjunction with the soils analyses results is adequate to design a safe and effective OWTS for the subject property



Andy Sorter, P.E.
Principal Engineer
OurEvolution Engineering, Inc.



**NORTH COAST
LABORATORIES LTD.**

May 19, 2021

Ourevolution
1821 Buttermilk Ln
Arcata, CA 95521

Attn: Andy Sorter

Order No.: 2104272
Invoice No.: 158624
PO No.:
ELAP No.1247-Expires July 2021

RE: Cisco Farms, INC. Septic Evaluation

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	TP 1
02A	TP 2

ND = Not Detected at the Reporting Limit

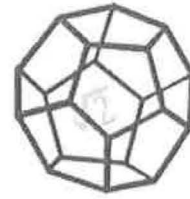
Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich, Project Manager



**NORTH COAST
LABORATORIES LTD.**

Date: 05/19/2021

Report to: Our Evolution Engineering Inc.
1821 Buttermilk Lane
Arcata, CA. 95521

Attn: Andy Sorter

NCL#: 2104272-01A

AP#: NA Hole#: NA Depth: NA Sample Description: TP 1
Project Name/Number: Cisco Farms Inc. Septic Evaluation Sampled by: Andy Sorter

Date Received: 04/16/21

Date Sampled: 04/08/21

SOIL EXAMINATION FOR SOIL PERCOLATION SUITABILITY

Textural Analysis	39 %	Sand
(2 sig. figs.)	26 %	Clay
	35 %	Silt
	21 %	Coarse Fragments by Volume
Bulk density N/Q* g/cc		Zone Classification: 2

Comments:

Zone 1 - Soils in this zone are very high in sand content. They readily accept effluent, but because of their low silt and clay content they provide minimal filtration. These soils demand greater separation distances from ground water.

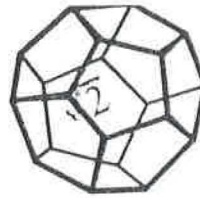
Zone 2 - Soils in this zone provide adequate percolation rates and filtration to effluent. They are suitable for use of a conventional system without further testing.

Zone 3 - Soils in this zone are expected to provide filtration of effluent, but their ability to accept effluent at a suitable rate is questionable. These soils require wet-weather percolation tests to verify their suitability for effluent disposal by conventional leach field methods.

Zone 4 - Soils in this zone are unsuitable for a conventional leach field because of their severe limitations for accepting effluent.

*The bulk densities of the samples were not quantifiable (NQ) due to lack of naturally occurring soil clods.

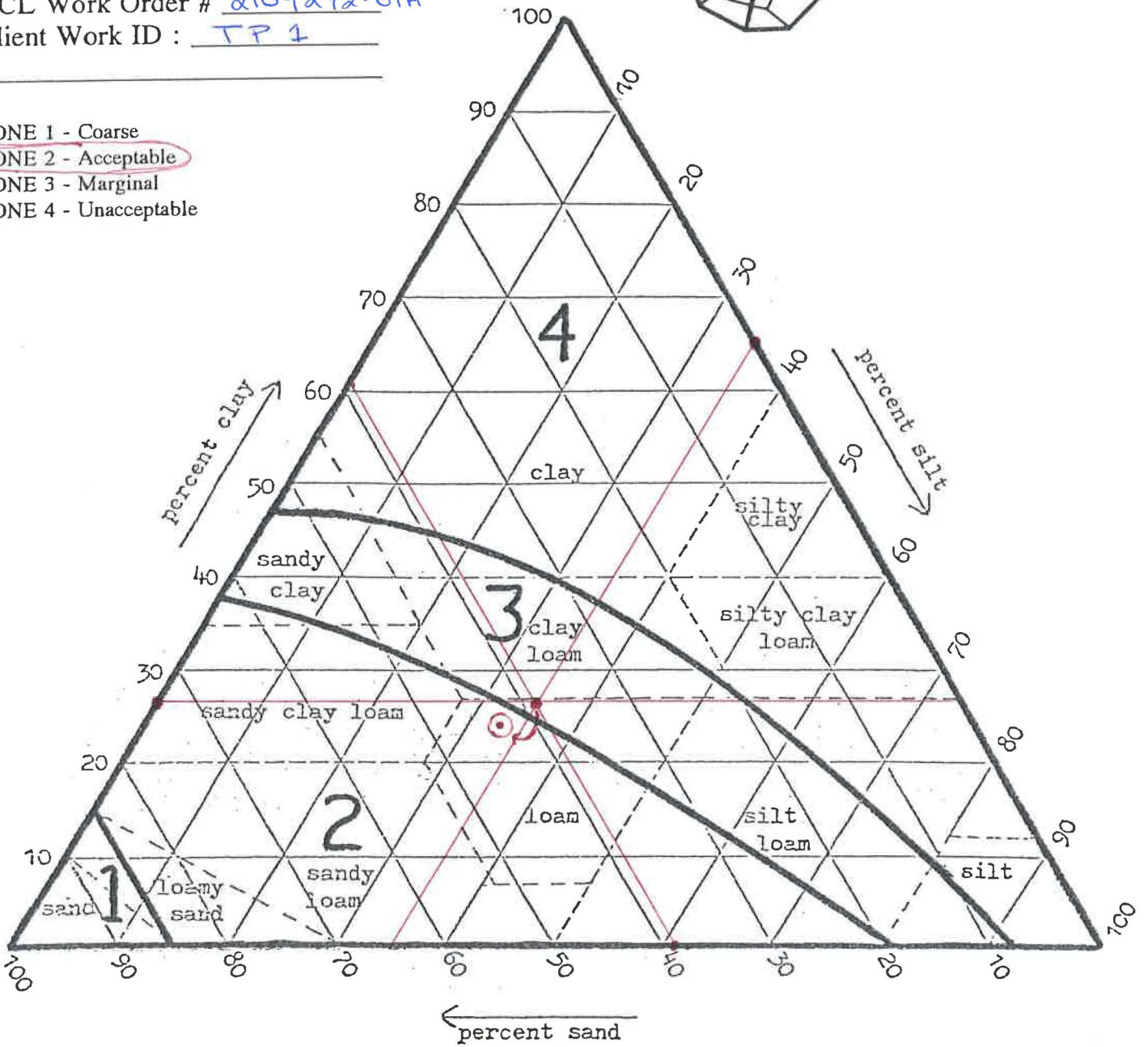
SOIL PERCOLATION SUITABILITY CHART



**NORTH COAST
LABORATORIES LTD.**

NCL Work Order # 2104272-01A
Client Work ID : TP 1

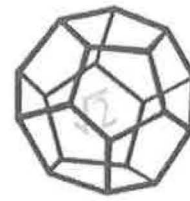
- ZONE 1 - Coarse
- ZONE 2 - Acceptable
- ZONE 3 - Marginal
- ZONE 4 - Unacceptable



1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15% for soils having a bulk density greater than 1.7 gm/cc.
4. For soils falling in sand, loamy sand or sandy loam classification bulk density analysis will generally not affect suitability and analysis will not be necessary.

RESULTS

39 % Sand 26 % Clay 35 % Silt 21 % Coarse Fragments Bulk Density: N/A g/cc



Date: 05/19/21

Report to: Our Evolution Engineering Inc.
1821 Buttermilk Lane
Arcata, CA. 95521

Attn: Andy Sorter

NCL#: 2104272-02A

AP#: NA Hole#: NA Depth: NA Sample Description: TP 2
Project Name/Number: Cisco Farms Inc. Septic Evaluation **Sampled by:** Andy Sorter

Date Received: 04/16/21

Date Sampled: 04/08/21

SOIL EXAMINATION FOR SOIL PERCOLATION SUITABILITY

Textural Analysis	53 %	Sand
(2 sig. figs.)	27 %	Clay
	20 %	Silt
	32 %	Coarse Fragments by Volume
Bulk density N/Q* g/cc		Zone Classification: 2

Comments:

Zone 1 - Soils in this zone are very high in sand content. They readily accept effluent, but because of their low silt and clay content they provide minimal filtration. These soils demand greater separation distances from ground water.

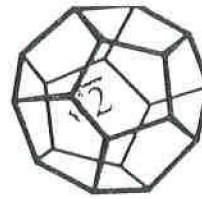
Zone 2 - Soils in this zone provide adequate percolation rates and filtration to effluent. They are suitable for use of a conventional system without further testing.

Zone 3 - Soils in this zone are expected to provide filtration of effluent, but their ability to accept effluent at a suitable rate is questionable. These soils require wet-weather percolation tests to verify their suitability for effluent disposal by conventional leach field methods.

Zone 4 - Soils in this zone are unsuitable for a conventional leach field because of their severe limitations for accepting effluent.

*The bulk densities of the samples were not quantifiable (NQ) due to lack of naturally occurring soil clods.

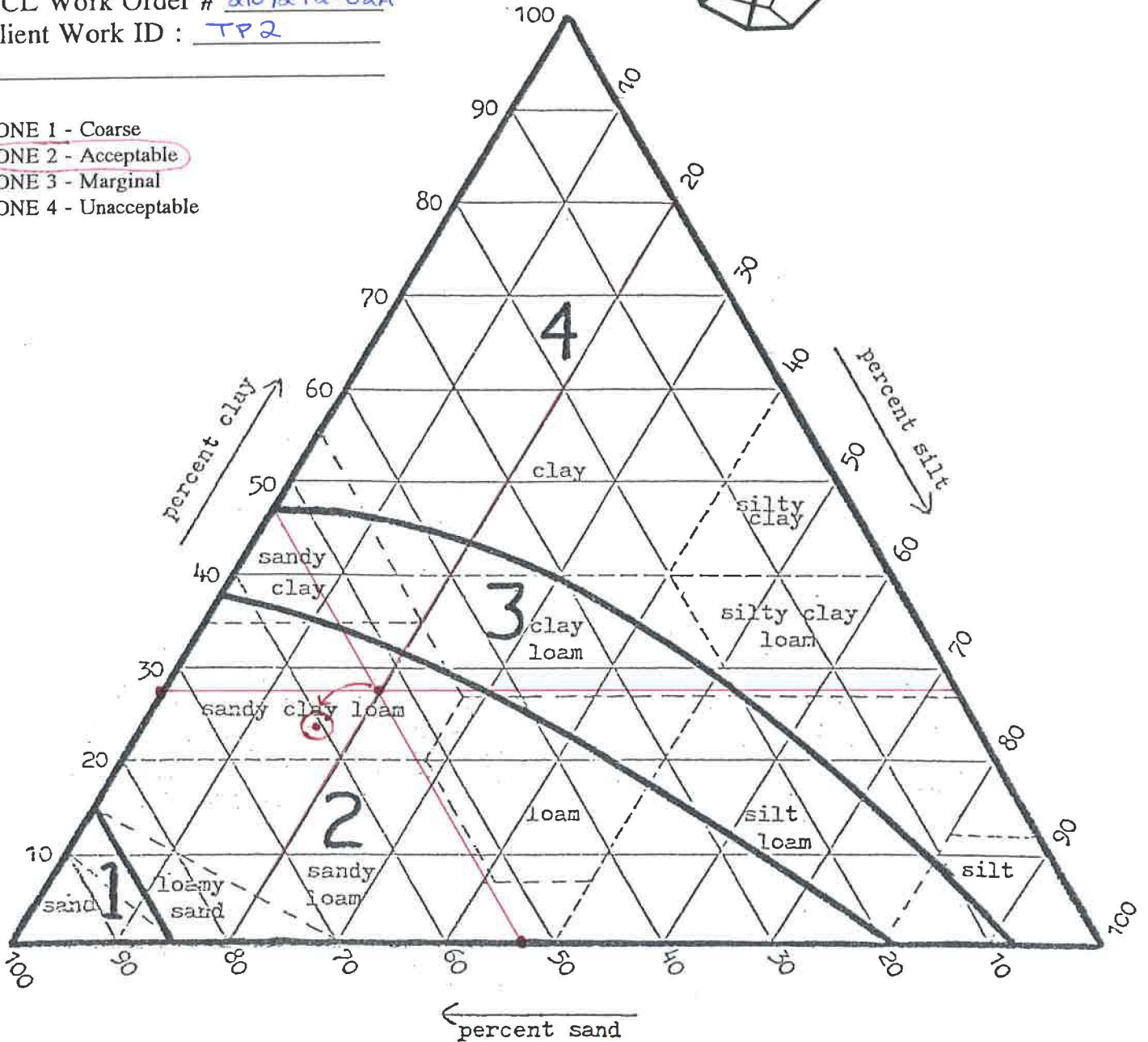
SOIL PERCOLATION SUITABILITY CHART



NORTH COAST LABORATORIES LTD.

NCL Work Order # 2104272-02A
 Client Work ID : TP2

- ZONE 1 - Coarse
- ZONE 2 - Acceptable
- ZONE 3 - Marginal
- ZONE 4 - Unacceptable



1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15% for soils having a bulk density greater than 1.7 gm/cc.
4. For soils falling in sand, loamy sand or sandy loam classification bulk density analysis will generally not affect suitability and analysis will not be necessary.

RESULTS

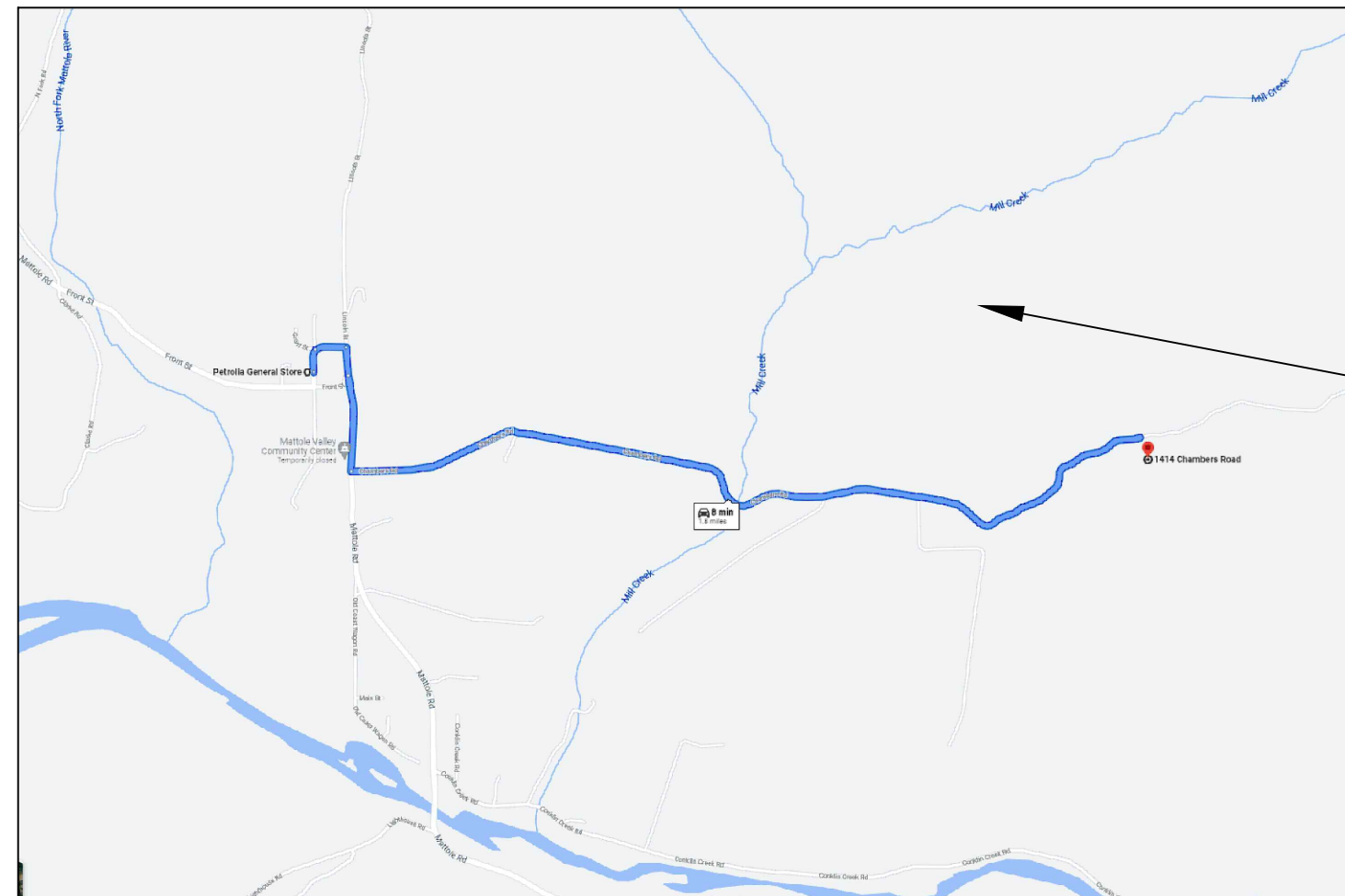
53 % Sand 27 % Clay 20 % Silt 32 % Coarse Fragments Bulk Density: N/A g/cc

ONSITE WASTEWATER TREATMENT SYSTEM DESIGN

CISCO FARMS, INC.
1414 CHAMBERS ROAD
PETROLIA, CA 95558

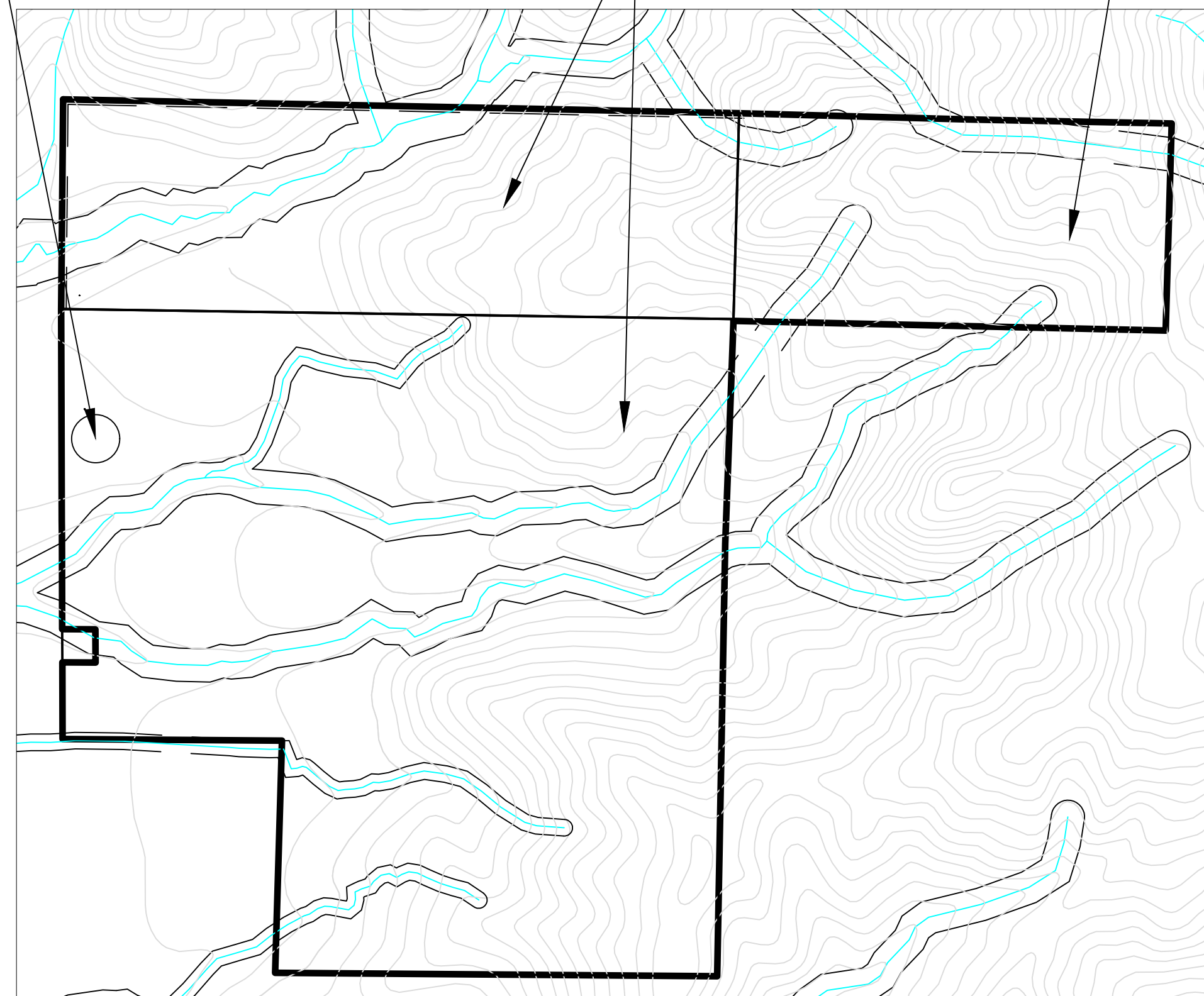
APNS: 105-101-011, 104-232-005 & 104-191-001

VICINITY MAP (N.T.S.)



PROJECT LOCATION

SUBJECT PARCEL



DRIVING DIRECTIONS FROM PETROLIA GENERAL STORE

1. NORTH ON SHERMAN AVENUE TOWARD GRANT STREET
2. RIGHT ON GRANT STREET
3. CONTINUE ONTO OLD COAST WAGON ROAD
4. CONTINUE ONTO MATTOLE ROAD (0.2 MILES)
5. TURN LEFT ONTO CHAMBERS ROAD (1.5 MILES)
1414 CHAMBERS ROAD ON RIGHT SIDE OF ROAD

PROJECT INFORMATION

APPLICANT: CISCO FARMS, INC.
PROPERTY OWNERS OF RECORD: BENEMANN FAMILY TRUST
OWNER ADDRESS: PO BOX 1083 TRINIDAD, CA 95570
APN: 105-101-011, 1044-232-005, & 104-191-001
(3 APNS CONSTITUTE ONE LEGAL PARCEL)
PROPERTY ADDRESS: 1414 CHAMBERS ROAD, PETROLIA, CA 95558
MERGED PROPERTY SIZE: 517 ACRES
CURRENT GENERAL PLAN: AG
ZONING WITH COMBINING ZONES: AE-B-5(160)

SHEET INDEX

- C1 – OWTS SITE PLAN
- C2 – OWTS PARTIAL PLAN, GENERAL NOTES & SPECIFICATIONS
- C3 – OWTS CONSTRUCTION DETAILS
- C4 – OWTS TYPICAL COMPONENTS
- C5 – OWTS SOILS ANALYSES & DESIGN CALCULATIONS

PREPARED BY:
OUREVOLUTION ENGINEERING, INC.
1821 BUTTERMILK LANE
ARCATA, CA 95521
ANDREW SORTER, P.E.

CALIFORNIA PROFESSIONAL ENGINEER # C73810
OCTOBER 26, 2021

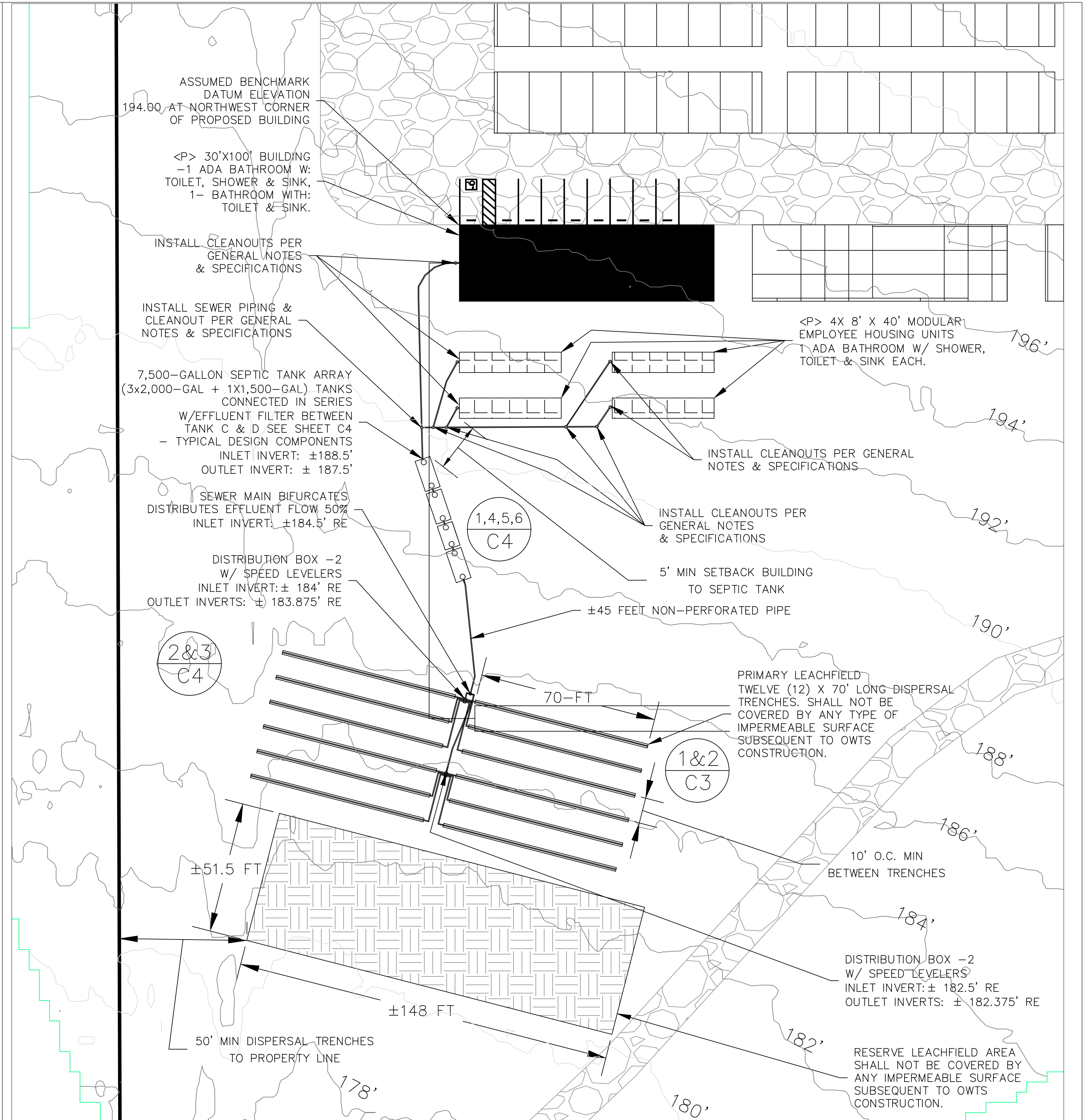
GENERAL NOTES:

- 1) TOPOGRAPHIC AND OTHER EXISTING CONDITIONS PRESENTED WITHIN THIS SHEET SET ARE BASED ON A SURVEY COMPLETED BY OTHERS. TOPOGRAPHIC INFORMATION PROVIDED IS RELATIVE AND BASED ON AN ASSUMED BENCHMARK DATUM OF 217.71' (AS NOTED) AT NW CORNER OF (E) APPROXIMATE PROPERTY/FENCELINE.
- 2) PROPERTY LINES SHOWN ARE BASED ON HUMBOLDT COUNTY WEBGIS DATA. NO BOUNDARY SURVEY WAS COMPLETED BY OUREVOLUTION ENGINEERING, INC.
- 3) EXISTING WATERCOURSES ON SUBJECT PROPERTY SHOWN PER NRCS, USGS STREAMLINES AND FIELD OBSERVATIONS.
- 4) NO PORTION OF THE PROPOSED PROJECT LOCATION IS WITHIN A STREAMSIDE MANAGEMENT AREA.
- 5) A LEGAL BOUNDARY SURVEY BY A CALIFORNIA LICENSED SURVEYOR IS RECOMMENDED PRIOR TO INITIATION OF CONSTRUCTION.
- 6) CONTRACTOR TO COMPLETE UNDERGROUND UTILITIES LOCATE THROUGH UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA PRIOR TO ANY EXCAVATION.

GENERAL NOTES AND SPECIFICATIONS

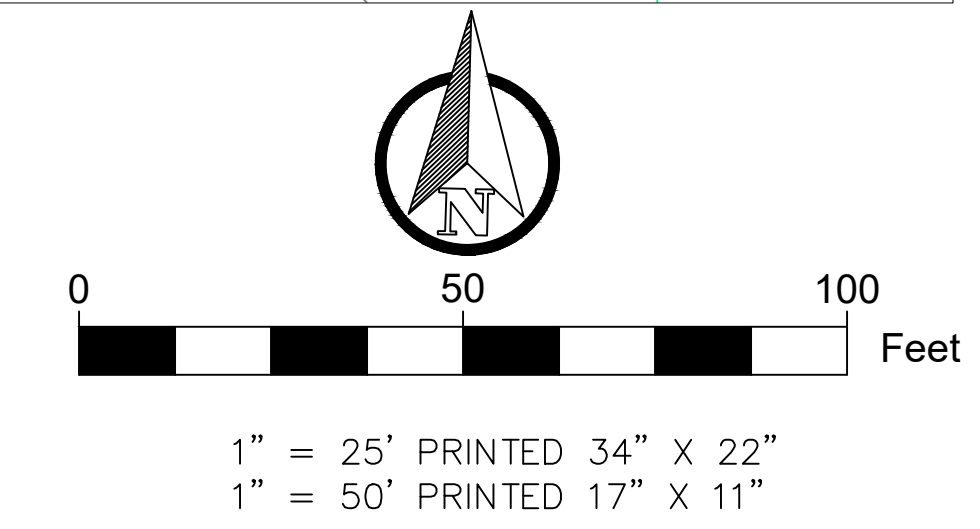
1. ANY VARIATIONS TO THIS DESIGN SHALL FIRST BE APPROVED BY THE ENGINEER OF RECORD AND THE COUNTY PRIOR TO INSTALLATION.
2. OWNER/INSTALLER SHALL NOT REMOVE OR DISTURB TOPSOIL IN THE DISPERSAL AREA PRIOR TO OR SUBSEQUENT TO INSTALLATION. REMOVAL OF TOPSOIL COULD RENDER THE PROPOSED SITE UNUSABLE.
3. ALL CONSTRUCTION MATERIALS AND THE INSTALLATION OF THIS DESIGNED OWTS SHALL CONFORM TO ALL APPLICABLE STATE AND COUNTY HEALTH DEPARTMENT AND MANUFACTURER REQUIREMENTS.
4. NEW AND REPLACEMENT SEPTIC TANKS SHALL BE APPROVED BY THE INTERNATIONAL ASSOCIATED OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO).
5. ALL TWO COMPARTMENT SEPTIC TANKS SHALL BE EQUIPPED WITH AN EFFLUENT FILTER (MEETING ANS/NSF STANDARD 46) LOCATED IN THE OUTLET COMPARTMENT IN SUCH A MANNER AS TO BE EASILY SERVICED.
6. SEPTIC TANKS SHALL BE INSTALLED IN A LOCATION THAT ALLOWS FOR PRACTICAL ACCESS AND SERVICING.
7. EXCAVATIONS FOR ALL SEPTIC TANKS SHALL PROVIDE A LEVEL, UNIFORM LOAD BEARING SURFACE FREE OF IMBEDDED ROCK OR BOULDERS. WET OR UNSTABLE BEDS SHALL BE OVER-EXCAVATED, BACKFILLED AND COMPACTED WITH AN APPROVED MATERIAL SUITABLE TO STABILIZE AND SUPPORT THE TANK.
8. ALL SEPTIC TANKS SHALL BE WATERTIGHT AND ODOR TIGHT.
9. SEPTIC TANK SHALL BE COMPOSED OF MULTIPLE 2,000-1,500-GALLON CAPACITY TANKS CONNECTED IN SERIES PER THE MANUFACTURERS RECOMMENDATIONS. ONE OF THE FOUR TANKS WILL FEATURE A BAFFLE TO ALLOW THE SYSTEM TO FUNCTION AS A TWO-COMPARTMENT CONSTRUCTION HAVING WATERTIGHT RISERS OVER EACH ACCESS OPENING WITH THE RISER TOPS SET WITHIN 6-INCHES OF FINISHED GRADE. THE FIRST COMPARTMENT SHALL BE TWICE THE CAPACITY OF THE SECOND COMPARTMENT.
10. SEPTIC TANK INLET AND OUTLET SHALL BE AT LEAST EQUAL IN DIAMETER TO THE BUILDING SEWER PIPE.
11. TYPE AND SIZE OF BUILDING SEWERS USED IN OWTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA UNIFORM PLUMBING CODE AND SHALL BE RUN IN A PRACTICAL ALIGNMENT AND AT A UNIFORM SLOPE OF NOT LESS THAN 1/4" PER FOOT TOWARDS DISTRIBUTION BOX AND PERFORATED PIPING.
12. OWTS SEWER PIPING SHALL BE 4"Ø SCHEDULE 40 PVC THAT MEETS MOST CURRENT ASTM D-2672 STANDARDS OR ASTM SDR35 PIPING WITH SOLVENT WELDED OR RUBBER GASKETED JOINTS.
13. ALL SEWER FITTINGS SHALL BE COMPATIBLE WITH 4"Ø SCHEDULE 40 PVC (ASTM D-2672) OR ASTM SDR35 PIPING AND SHALL BE PLUMBED IN A MANNER THAT RENDERS THEM WATER TIGHT.
14. MINIMUM FIRST FIVE FEET OF PIPE EXTENDING FROM DISTRIBUTION BOX SHALL BE SOLID, NON-PERFORATED PIPE.
15. PERFORATED DISPERSAL LINE SHALL HAVE TWO ROWS OF HOLES SPACED ONE HUNDRED-TWENTY (120) DEGREES APART AND SIXTY (60) DEGREES ON EITHER SIDE OF PIPE INVERT CENTERLINE.
16. INSTALL PERFORATED DISPERSAL LINE SUCH THAT THE HOLES ARE LOCATED AT APPROXIMATELY THE 4:00 AND 8:00 O'CLOCK POSITION.
17. A MINIMUM OF 12" OF EARTH FILL FROM PIPE INVERT SHALL COVER ALL BUILDING AND OWTS SEWER LINES.
18. MAINTAIN MINIMUM 18" OF STRAIGHT PIPE ENTERING AND EXITING ALL TANKS AND DISTRIBUTION BOX.
19. WATERTIGHT PIPING LEAVING DISTRIBUTION BOX (MANIFOLD) SHALL BE LEVEL FOR FIRST 18" THEN SLOPED

20. SEWER/OWTS PIPING SHALL BE LAID ON A FIRM BED THROUGHOUT ITS ENTIRE LENGTH, FREE OF ORGANIC MATERIALS, LARGE ANGULAR ROCKS OR OTHER MATERIAL THAT COULD NEGATIVELY IMPACT PIPING.
21. DISPERSAL TRENCH PERFORATED PIPING MUST BE INSTALLED LEVEL TO WITHIN 2" PER 100 FEET OF PIPING.
22. ALL CONVEYANCE, INLET AND OUTLET PIPING MUST BE PROPERLY SUPPORTED AND BEDDED.
23. CLEANOUTS SHALL BE PLACED ON THE BUILDING SEWER AT THE JUNCTION WITH THE BUILDING DRAIN, AT INTERVALS NOT TO EXCEED 100' IN STRAIGHT RUNS AND AT EVERY CHANGE IN ALIGNMENT OR GRADE IN EXCESS OF 22.5°.
24. EACH CLEANOUT SHALL BE INSTALLED SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF SEWAGE OR WASTE OR AT RIGHT ANGLES THERETO AND VERTICALLY ABOVE THE FLOW OF THE PIPE.
25. DUE TO THE MILDLY SLOPING TERRAIN IN THE PROPOSED DISPERSAL AREA, A DISTRIBUTION BOX WITH "SPEED LEVELERS" IS REQUIRED TO EVENLY DISTRIBUTE EFFLUENT.
26. DISTRIBUTION BOXES SHALL BE SET ON A LEVEL, COMPETENT BASE.
27. DISPERSAL FIELD TRENCHES AND PIPING SHALL BE ORIENTED PARALLEL TO THE NATURAL GROUND CONTOUR.
28. MAINTAIN MINIMUM 10' O.C. BETWEEN DISPERSAL TRENCHES.
29. THE BOTTOM OF THE DISPERSAL FIELD TRENCH SHALL BE LEVEL TO WITHIN A TOLERANCE OF 2" PER 100 FT.
30. ALL SMEARED OR COMPACTED ABSORPTION SURFACES (SIDEWALLS AND/OR TRENCH BOTTOM) SHALL BE SCARIFIED TO THE DEPTH OF THE SMEARING OR COMPACTION AND THE LOOSE MATERIAL REMOVED PRIOR TO PLACEMENT OF DRAIN ROCK.
31. DRAIN ROCK SHALL CONSIST OF 3/4" TO 2 1/2" DIAMETER, CLEAN, UNIFORMLY GRADED, NON-DETERIORATING RIVER ROCK, GRAVEL OR OTHER APPROVED HARD ROCK WITH THE PERCENT PASSING THE U.S. NO. 200 SEIVE NO GREATER THAN 0.5%.
32. NO DISPERSAL FIELD OR REPLACEMENT AREA SHALL BE COVERED BY ANY TYPE OF IMPERMEABLE SURFACE.
33. SUITABLE BACKFILL IS FREE FROM ORGANIC MATERIALS, DEBRIS, LARGE AND/OR ANGULAR ROCKS, OR SATURATED SOILS.
34. ONCE AN OWTS IS INSTALLED, THE SOILS IN THE DISPERSAL FIELD AREA AND REPLACEMENT AREA SHALL REMAIN UNDISTURBED AND NOT SUBJECT TO VEHICULAR TRAFFIC OR CONFINED ANIMAL USE.
35. 10' MINIMUM SETBACK FROM LARGE TREES TO SEPTIC TANK AND DISPERSAL AREA.
36. 5' MINIMUM SETBACK FROM BUILDINGS TO SEPTIC TANK.
37. 25' MINIMUM SETBACK FROM SEPTIC TANK TO PROPERTY LINES.
38. 10' MINIMUM SETBACK FROM BUILDINGS TO DISPERSAL AREA.
39. 50' MINIMUM SETBACK FROM DISPERSAL AREA TO PROPERTY LINES.
40. OWNER/CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING ALL HUMBOLDT COUNTY INSPECTION REQUIREMENTS AND TIMELINES BEFORE, DURING AND AFTER CONSTRUCTION.
41. IT IS RECOMMENDED THAT THE INSTALLER REVIEW MATERIALS, EQUIPMENT, INSTALLATION AND INSPECTION REQUIREMENTS DETAILED IN THE MOST CURRENT HUMBOLDT COUNTY ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) REGULATIONS AND TECHNICAL MANUAL.



OWTS MAY BE INSTALLED IN TWO PHASES. INITIAL PHASE MAY INCLUDE INSTALLATION OF NORTHERN MOST (DISTRIBUTION BOX-1), NORTHERN MOST SIX DISPERSAL TRENCHES AND (INTERIOR) 2,000-GALLON AND (COMPARTMENTED) 1,500-GALLON SEPTIC TANKS REFERRED TO AS (TANKS B & C, SEE SHEET C4-1). INITIAL PHASE (DISTRIBUTION BOX -1) WILL STUB OUT TO SOUTHERN (DISTRIBUTION BOX-2) & DISPERSAL TRENCHES.

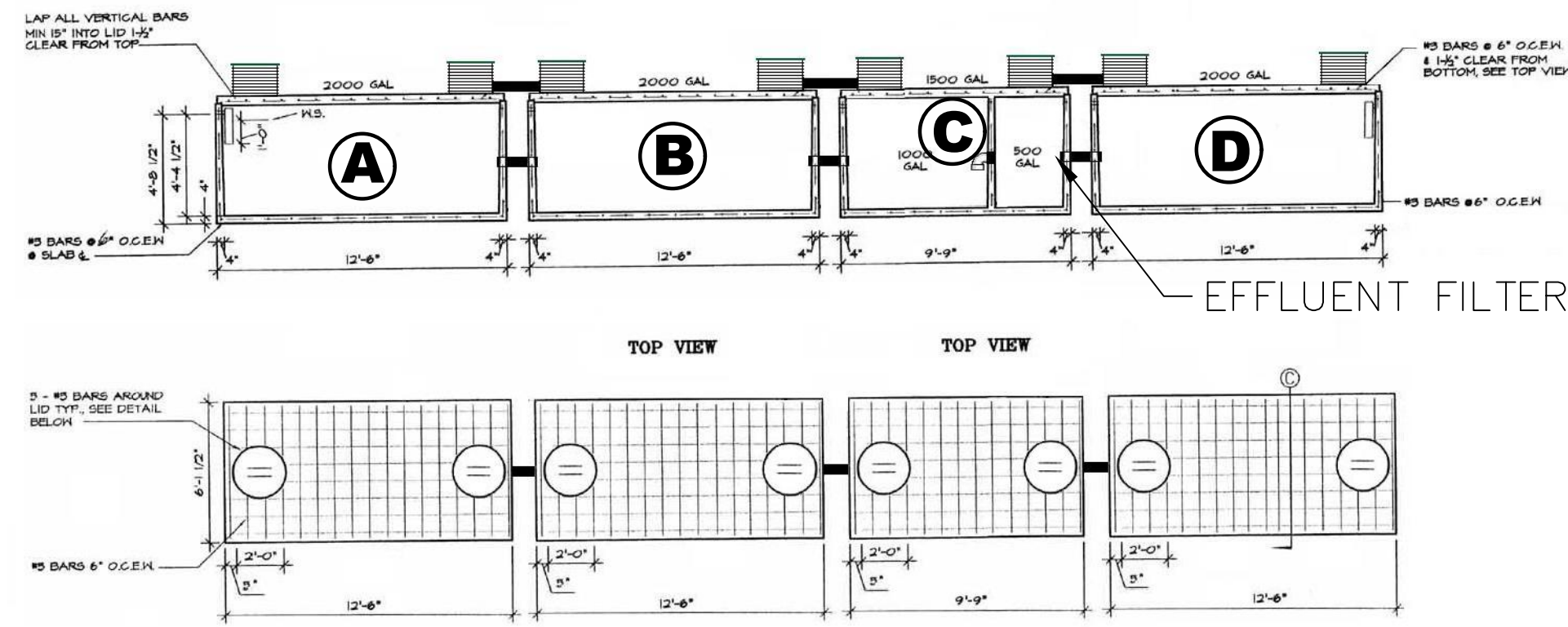
FINAL (AT PROJECT BUILD OUT) WILL INCLUDE INSTALLATION OF SOUTHERN DISTRIBUTION BOX, SOUTHERN MOST SIX DISPERSAL TRENCHES AND TWO (EXTERIOR, OR "A" AND "D") 2,000-GALLON SEPTIC TANKS. SEE SHEET C4-1 FOR SEPTIC TANK CONFIGURATION & LABELING.



<p>OUREVOLUTION ENGINEERING, INC. 1821 BUTTERMILK LANE ARCATA, CA 95521 360.791.3259 ANDY@OUREVOLUTION.COM</p>	
<p>HISTORY / REVISION BY/CHK. DATE</p>	<p>NO. 1</p>
<p>OE SUBMITTAL #1 ACS/GAC09/15/20</p>	<p>APNS: 105-101-011, 104-232-005 & 104-191-001 1414 CHAMBERS ROAD, PETROLIA, CA 95558 ONSITE WASTEWATER TREATMENT SYSTEM</p>
<p>CISCO FARMS, INC. OWTS PARTIAL PLAN GENERAL NOTES AND SPECIFICATIONS</p>	
<p>DRAWN GSA</p>	<p>CHECK ACS</p>
<p>APPROVED ACS</p>	<p>DATE 10/26/2021</p>
<p>JOB NUMBER CF-21</p>	<p>SHEET C2</p>

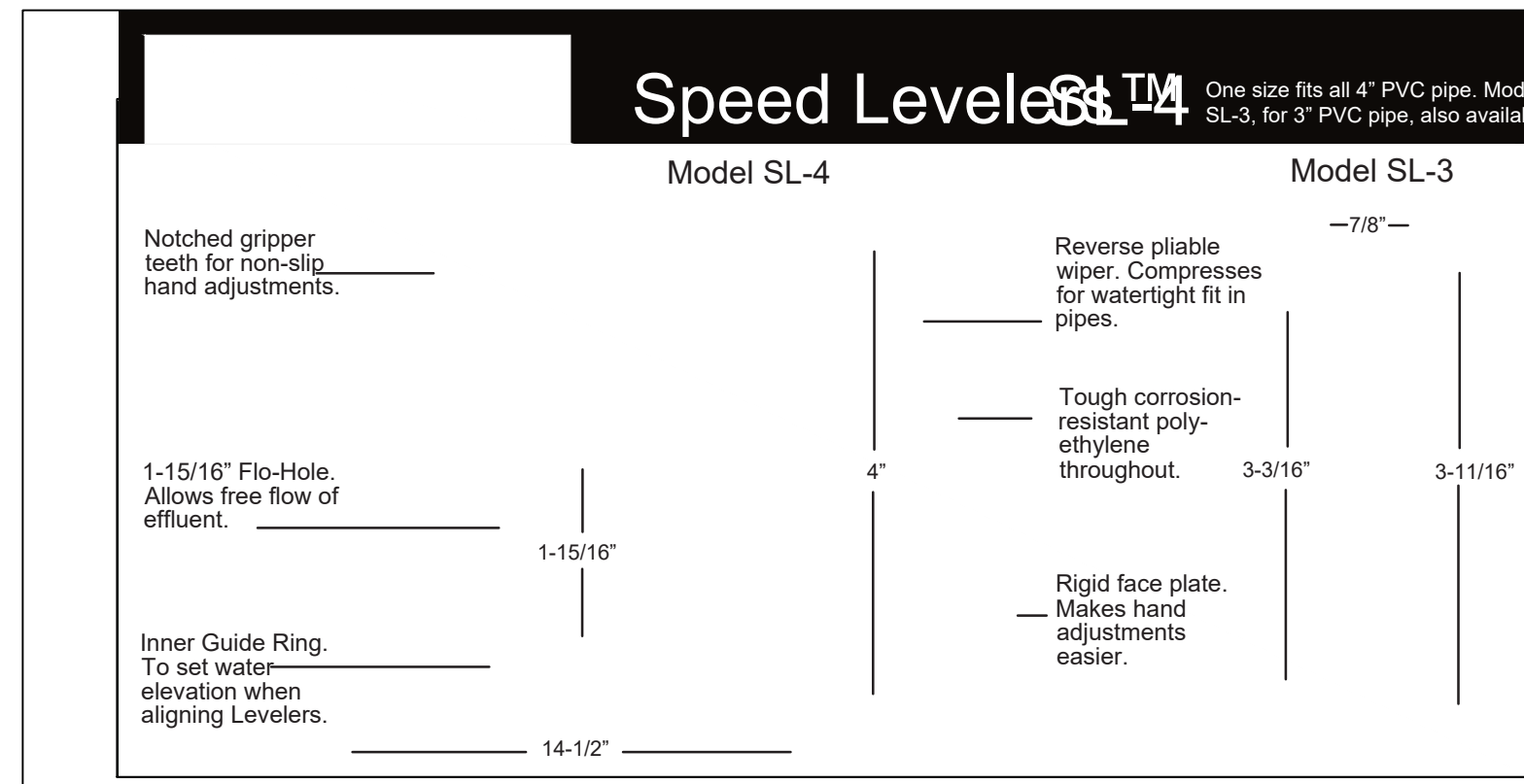


7500 GALLONS TOTAL



IAPMO listings for individual tanks can be found at the following:
<https://pml.iapmo.org/pld/certificate/2975/2179>
<https://pml.iapmo.org/pld/certificate/4764/3279>

C4-1 TYPICAL 1,500 & 2,000-GAL IAPMO APPROVED SEPTIC TANK SYSTEM (SERIES)



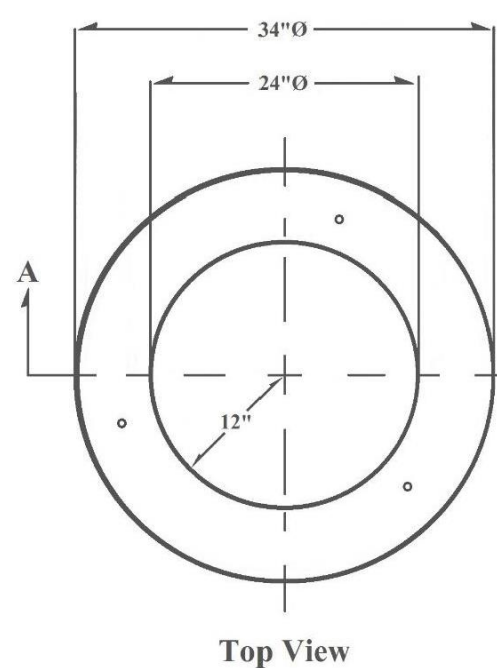
C4-3 TYPICAL SPEED LEVELER ASSEMBLY



CONCRETE GRADE RINGS
24" id / 34" od

Available Sizes 24" id / 34" od	Weight Approx.
3" Concrete Grade Ring	80 lbs.
6" Concrete Grade Ring	160 lbs.
12" Concrete Grade Ring	320 lbs.

Conforms to ASTM Standards.



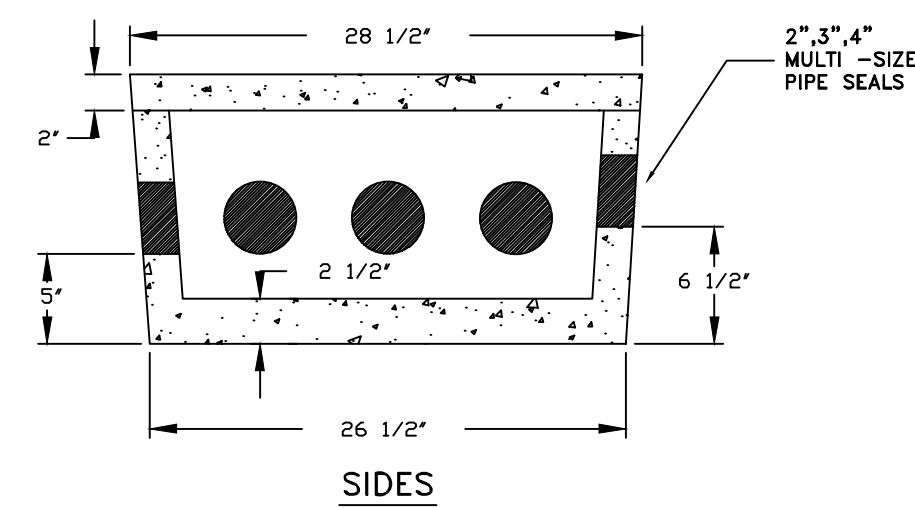
Cross Sections A-A

3309 Sebastopol Road
Santa Rosa, CA 95407
P (707) 542-2762
F (707) 542-3901

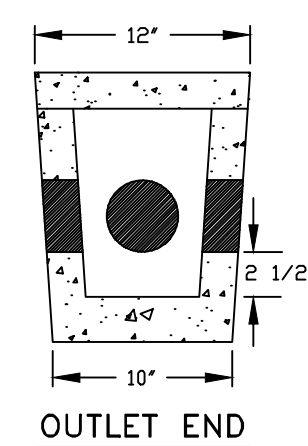
C4-5 TYPICAL SEPTIC TANK RISER RING

Date: 6/7/99 DWG # 808 FLEMINGTON PRECAST & SUPPLY, L.L.C.

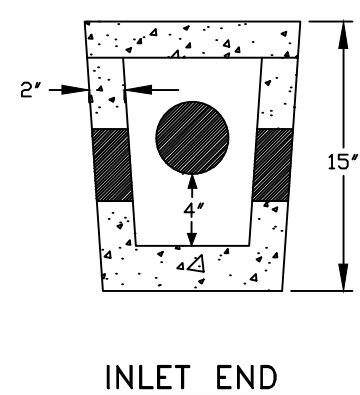
This Distribution Box Meets or Exceeds The Requirements of N.J.A.C. 7:9A



SIDES



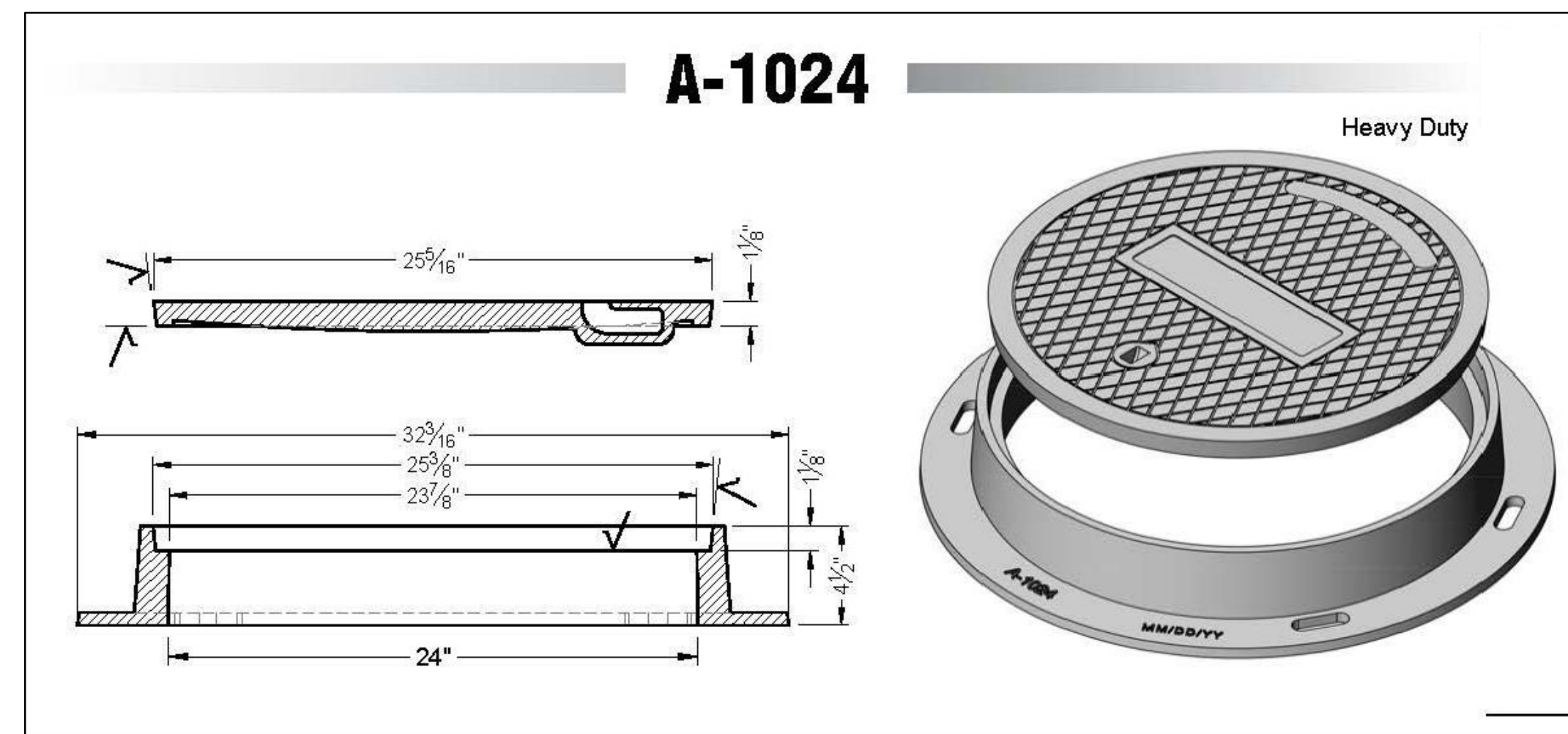
OUTLET END



INLET END

SPECIFICATIONS SEPTTECH™ 8 HOLE DISTRIBUTION BOX (1 INLET/7 OUTLETS) 8DB

Minimum Concrete Strength - 4000 P.S.I. @ 28 Days
 Reinforcement - 6"x6"x10 Ga. wire mesh in Lid
 Secondary Reinforcement Synthetic Fibers Throughout
 Design - Distribution Box to be As Manufactured By:
 FLEMINGTON PRECAST & SUPPLY, L.L.C.
 18 Allen Street, Flemington, NJ 08822-1120
 Ph. (908) 782-3246 Fax (908) 782-1981



C4-4 TYPICAL SEPTIC TANK RISER ACCESS PORT (LIDDED COVER)

C4-6 TYPICAL SEPTIC TANK EFFLUENT FILTER

C4-2 TYPICAL DISTRIBUTION BOX

OUREVOLUTION ENGINEERING, INC.
1821 BUTTERMILK LANE
ARCATA, CA 95521
360.791.3259
ANDY@OUREVOLUTION.COM

NO.	HISTORY / REVISION	BY	CHK.	DATE

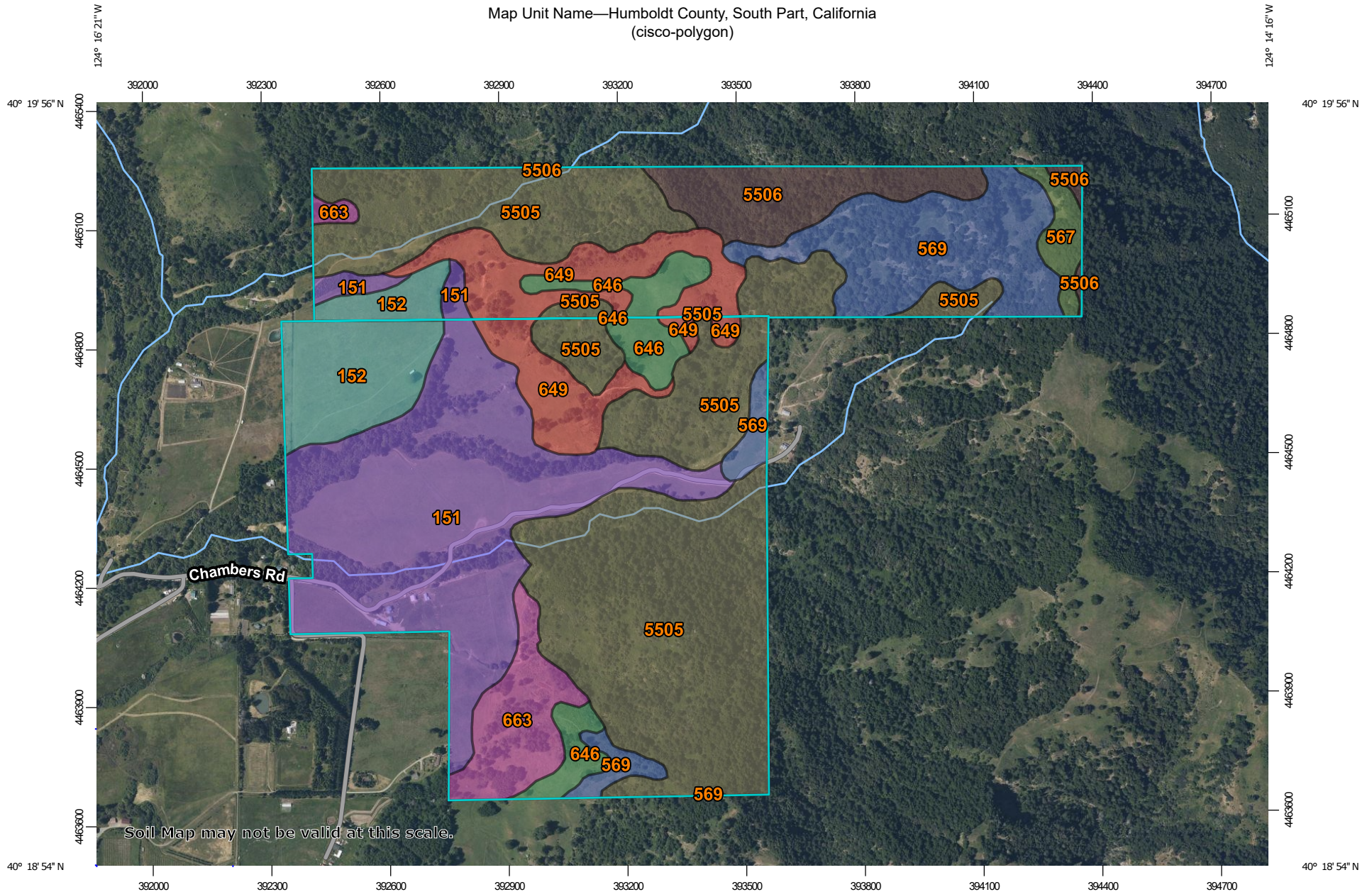
CISCO FARMS, INC.
APNS: 105-101-011, 104-232-005 & 104-191-001
1414 CHAMBERS ROAD, PETROLIA, CA 95558
ONSITE WASTEWATER TREATMENT SYSTEM

OWTS TYPICAL COMPONENTS

DRAWN GSA
CHECK ACS
APPROVED ACS
DATE 10/26/2021
JOB NUMBER CF-21

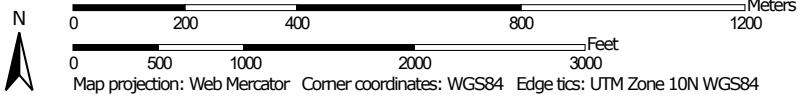
SHEET
C4

Map Unit Name—Humboldt County, South Part, California
(cisco-polygon)



Soil Map may not be valid at this scale.


Map Scale: 1:13,500 if printed on A landscape (11" x 8.5") sheet.



Map Unit Name—Humboldt County, South Part, California
(cisco-polygon)








MAP LEGEND




Area of Interest (AOI)

 Area of Interest (AOI)







Soils





Soil Rating Polygons

-  Benbow, 2 to 9 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 30 to 50 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 50 to 75 percent slopes
-  Crazycoyote-Sproulis-Caperidge complex, 15 to 50 percent slopes
-  Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes
-  Parkland-Garberville complex, 2 to 9 percent slopes
-  Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes






-  Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes
-  Yorknorth-Windynip complex, 15 to 50 percent slopes
-  Not rated or not available






Soil Rating Lines

-  Benbow, 2 to 9 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 30 to 50 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 50 to 75 percent slopes
-  Crazycoyote-Sproulis-Caperidge complex, 15 to 50 percent slopes
-  Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes
-  Parkland-Garberville complex, 2 to 9 percent slopes


-  Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes
-  Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes
-  Yorknorth-Windynip complex, 15 to 50 percent slopes
-  Not rated or not available

Soil Rating Points






-  Benbow, 2 to 9 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 30 to 50 percent slopes
-  Crazycoyote-Sproulis-Canoecreek complex, 50 to 75 percent slopes
-  Crazycoyote-Sproulis-Caperidge complex, 15 to 50 percent slopes
-  Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes

-  Parkland-Garberville complex, 2 to 9 percent slopes
-  Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes
-  Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes
-  Yorknorth-Windynip complex, 15 to 50 percent slopes
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 10, Sep 6, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2019—Jun 21, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Name

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
151	Parkland-Garberville complex, 2 to 9 percent slopes	Parkland-Garberville complex, 2 to 9 percent slopes	114.9	22.8%
152	Benbow, 2 to 9 percent slopes	Benbow, 2 to 9 percent slopes	32.9	6.5%
567	Crazycoyote-Sproulish-Caperidge complex, 15 to 50 percent slopes	Crazycoyote-Sproulish-Caperidge complex, 15 to 50 percent slopes	6.5	1.3%
569	Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes	Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes	51.3	10.2%
646	Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes	Wirefence-Windynip-Devilshole complex, 5 to 30 percent slopes	18.9	3.8%
649	Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes	Windynip-Wirefence-Devilshole complex, 30 to 50 percent slopes	42.5	8.4%
663	Yorknorth-Windynip complex, 15 to 50 percent slopes	Yorknorth-Windynip complex, 15 to 50 percent slopes	22.4	4.5%
5505	Crazycoyote-Sproulish-Canoecreek complex, 30 to 50 percent slopes	Crazycoyote-Sproulish-Canoecreek complex, 30 to 50 percent slopes	187.7	37.2%
5506	Crazycoyote-Sproulish-Canoecreek complex, 50 to 75 percent slopes	Crazycoyote-Sproulish-Canoecreek complex, 50 to 75 percent slopes	26.8	5.3%
Totals for Area of Interest			504.0	100.0%

Description

A soil map unit is a collection of soil areas or nonsoil areas (miscellaneous areas) delineated in a soil survey. Each map unit is given a name that uniquely identifies the unit in a particular soil survey area.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

CENCI CONSULTING
PO BOX 148
PETROLIA, CA 95558

Attn: Michael Holtermann
County of Humboldt
Planning & Building Department
Cannabis Services Division
3015 H Street
Eureka, CA. 95501

RE: Record No. PLN-2021-17384, APN 105-011-000 et al.
Cisco Farms Inc.
Agricultural activities and relation to Williamson Act

December 28, 2021

Dear Michael,

This letter describes background information and current grazing activities on the property that is known as the “Walker Preserve” (Preserve Nos. 79-6 and 84-20) that consists of APNs 104-191-001, 104-221-017, 104-222-017, 104-232-003, 104-232-004, 104-232-005, and 105-101-011.

The property has been in the Williamson Act program since 1979 when it was established as the approximately 834-acre Lowell Walker Class B Agricultural Preserve (Preserve No. 79-6, Resolution No. 79-19). In 1984, 200 acres were added to the Preserve (Preserve No. 84-2, (Resolution No. 84-20), bringing the area to its current 1034-acres. In March of 2020, the property was transferred in its entirety from Richard Cogswell to Karl and Esther Benemann / Benemann Family Revocable Trust.

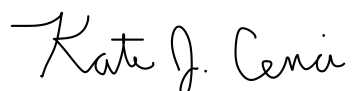
The property has been used for cattle grazing continuously since its establishment as an agricultural preserve and the new owners are continuing this activity. Current (2022) activities also include a grazing lease for a dairy operation, owned by Mr. John Vevoda out of Ferndale, CA. Grazing operations are focused on heifers (young cows that do not yet produce milk) and are scheduled from January – July. The number of heifers at any one time on the property will vary throughout the season as the amount of available forage increases but 40-120 animals is anticipated – enough to graze the property sustainably and properly in accordance with grazing best management practices.

The grazing of beef cattle and dairy cows is consistent with the requirements of the county’s Williamson Act guidelines for a Class B preserve. The property remains in compliance with all aspects of the Williamson Act guidelines and the resolution establishing the preserve with uniform rules, including compatible uses.

It should be noted that only APNs 105-101-011, 104-232-005, and 104-191-001 pertain to the legal lot where cannabis will be cultivated. This lot is a total 504 acres. The project will occupy a total area of ~22 acres, including all cannabis cultivation areas, nursery greenhouses, associated buildings, employee housing, roads and parking areas, and water storage infrastructure. This is approximately 4% of lot acreage and 2% of total preserve acreage. The remainder of the preserve acreage (98%) will remain available for grazing operations.

If you have any questions regarding information included herein or need additional information, please do not hesitate to call or email me. Thank you for all your work on this Project and your dedication to legal cannabis in Humboldt County.

Sincerely,

A handwritten signature in black ink that reads "Kate J. Cenci". The signature is written in a cursive, flowing style.

Kate Cenci
707-616-7207
cenciconsulting@gmail.com

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Cisco Farms, Inc. Cannabis Project
Humboldt County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	285.56	1000sqft	6.56	285,560.00	0
General Light Industry	22.20	1000sqft	0.51	22,200.00	0
Mobile Home Park	1.07	Dwelling Unit	0.13	1,284.00	3

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	103
Climate Zone	1	Operational Year		2023	
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - September 1st, 2022 Construction Start Date

Land Use - Assumed "Industrial - Unrefrigerated Warehouse - No Rail" for 6.56 acres (285,560 SF) of cannabis cultivation/nursery activities (inc. 3 acres full-sun outdoor, 1 acre of mixed-light, 1 acre of light-deprivation, and 1.56 acres of nursery)

Assumed "Industrial - General Light Industry" for 3,000 SF of commercial processing & 19,200 SF of ancillary drying (total of 22,200 SF)

Assumed "Residential - Mobile Home Park" for farmworker housing. Adjusted unit amount to match 1,280 SF.

Construction Phase - Construction is proposed to be staggered over a 5-year period. To take a conservative approach and calculate the maximum amount of emissions to be emitted at one time, construction events were consolidated for the purpose of this Air Quality Monitoring. Demolition, Site Preparation, Paving, & Architectural Coating removed.

Grading - Assumed 6 acre for grading for pond & cultivation activities

Trips and VMT - Assumptions made per discussion with applicant

On-road Fugitive Dust - Approximately 95% paved roads

Road Dust - Reduced percent paved from 100 to 95.

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - No woodstoves or fireplaces proposed.

Area Coating - No architectural coatings proposed. Buildings are manufactured buildings assembled onsite or brought to site.

Water And Wastewater - Site served by onsite septic system.

Water use values from the Cultivation and Operations Plan (Cenci Consulting, 2021)

Solid Waste - General Light Industry is processing/drying - all waste would be composted onsite

Residential & Cultivation waste values sourced from Cultivation and Operations Plan (Cenci Consulting, 2021)

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps - Assumed (2) 10kW emergency generators

Assumed 7 days per year of emergency usage, 24 hours per day.

Land Use Change - Calculation based on replacing grassland with permanently disturbed area from the rainwater catchment pond, farmworker housing, processing building, and drying structures (total of 1.6 acres).

Vehicle Trips - Assumed 55 trips per day (maximum) for General Light Industry Land Use Type (employees/deliveries associated with cultivation & nursery)

Assumed no trips for onsite farmworker housing

Assumed 5 trips per day for processing/drying activities.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	153880	0
tblAreaCoating	Area_Nonresidential_Interior	461640	0
tblAreaCoating	Area_Residential_Exterior	867	0
tblAreaCoating	Area_Residential_Interior	2600	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	100.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	9/27/2023	1/8/2023
tblConstructionPhase	PhaseEndDate	11/9/2022	9/30/2022
tblConstructionPhase	PhaseStartDate	11/10/2022	10/1/2022
tblConstructionPhase	PhaseStartDate	10/13/2022	9/1/2022
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	0.59	0.00
tblFireplaces	NumberNoFireplace	0.11	0.00
tblFireplaces	NumberWood	0.37	0.00
tblGrading	AcresOfGrading	30.00	6.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	100	95
tblSolidWaste	SolidWasteGenerationRate	27.53	0.00
tblSolidWaste	SolidWasteGenerationRate	0.49	0.08
tblSolidWaste	SolidWasteGenerationRate	268.43	0.10
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CO_EF	4.93	4.93
tblStationaryGeneratorsPumpsEF	NOX_EF	5.32	5.32
tblStationaryGeneratorsPumpsEF	PM10_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	18.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	24.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	168.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	51.00	0.00

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	130.00	15.00
tblVehicleTrips	ST_TR	1.99	0.23
tblVehicleTrips	ST_TR	4.61	0.00
tblVehicleTrips	ST_TR	1.74	0.19
tblVehicleTrips	SU_TR	5.00	0.23
tblVehicleTrips	SU_TR	4.24	0.00
tblVehicleTrips	SU_TR	1.74	0.19
tblVehicleTrips	WD_TR	4.96	0.23
tblVehicleTrips	WD_TR	5.00	0.00
tblVehicleTrips	WD_TR	1.74	0.19
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	5,133,750.00	10,429.00
tblWater	IndoorWaterUseRate	69,714.81	101,280.00
tblWater	IndoorWaterUseRate	66,035,750.00	0.00
tblWater	OutdoorWaterUseRate	43,950.64	0.00
tblWater	OutdoorWaterUseRate	0.00	2,154,095.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1146	1.0368	1.0305	1.7900e-003	0.9180	0.0514	0.9694	0.1340	0.0481	0.1821	0.0000	155.2329	155.2329	0.0385	3.8000e-004	156.3111
2023	6.7100e-003	0.0579	0.0679	1.1000e-004	0.0540	2.8000e-003	0.0568	5.5100e-003	2.6400e-003	8.1400e-003	0.0000	9.8813	9.8813	2.2300e-003	2.0000e-005	9.9437
Maximum	0.1146	1.0368	1.0305	1.7900e-003	0.9180	0.0514	0.9694	0.1340	0.0481	0.1821	0.0000	155.2329	155.2329	0.0385	3.8000e-004	156.3111

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1146	1.0368	1.0305	1.7900e-003	0.9180	0.0514	0.9694	0.1340	0.0481	0.1821	0.0000	155.2327	155.2327	0.0385	3.8000e-004	156.3109
2023	6.7100e-003	0.0579	0.0679	1.1000e-004	0.0540	2.8000e-003	0.0568	5.5100e-003	2.6400e-003	8.1400e-003	0.0000	9.8813	9.8813	2.2300e-003	2.0000e-005	9.9437
Maximum	0.1146	1.0368	1.0305	1.7900e-003	0.9180	0.0514	0.9694	0.1340	0.0481	0.1821	0.0000	155.2327	155.2327	0.0385	3.8000e-004	156.3109

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8802	0.8802
2	12-1-2022	2-28-2023	0.3366	0.3366
		Highest	0.8802	0.8802

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2075	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192
Energy	4.4000e-004	3.9900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	13.5354	13.5354	1.5700e-003	2.6000e-004	13.6520
Mobile	0.0535	0.1059	0.5223	9.0000e-004	4.3468	1.1200e-003	4.3479	0.4464	1.0600e-003	0.4474	0.0000	83.8652	83.8652	5.9600e-003	4.9500e-003	85.4892
Stationary	4.9600e-003	0.0259	0.0240	2.0000e-005		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	2.3031	2.3031	3.2000e-004	0.0000	2.3111
Waste						0.0000	0.0000		0.0000	0.0000	0.0365	0.0000	0.0365	2.1600e-003	0.0000	0.0905
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.7535	0.7535	0.0255	1.0000e-004	1.4209
Total	1.2663	0.1359	0.5603	9.4000e-004	4.3468	4.3800e-003	4.3512	0.4464	4.3200e-003	0.4507	0.0365	100.4755	100.5121	0.0355	5.3100e-003	102.9829

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-6.8960
Total	-6.8960

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2022	9/30/2022	7	30	
2	Building Construction	Building Construction	10/1/2022	1/8/2023	7	100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29

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Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	15.00	0.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0935	0.0000	0.0935	0.0500	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0292	0.3128	0.2291	4.4000e-004		0.0141	0.0141		0.0130	0.0130	0.0000	39.0822	39.0822	0.0126	0.0000	39.3982
Total	0.0292	0.3128	0.2291	4.4000e-004	0.0935	0.0141	0.1076	0.0500	0.0130	0.0630	0.0000	39.0822	39.0822	0.0126	0.0000	39.3982

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	2.0000e-004	3.0000e-005	0.0000	1.0700e-003	0.0000	1.0700e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0612	0.0612	0.0000	1.0000e-005	0.0641
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	1.2900e-003	0.0120	3.0000e-005	0.2022	2.0000e-005	0.2023	0.0206	2.0000e-005	0.0206	0.0000	2.3212	2.3212	9.0000e-005	9.0000e-005	2.3503
Total	1.6800e-003	1.4900e-003	0.0120	3.0000e-005	0.2033	2.0000e-005	0.2033	0.0207	2.0000e-005	0.0207	0.0000	2.3824	2.3824	9.0000e-005	1.0000e-004	2.4144

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0935	0.0000	0.0935	0.0500	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0292	0.3128	0.2291	4.4000e-004		0.0141	0.0141		0.0130	0.0130	0.0000	39.0821	39.0821	0.0126	0.0000	39.3981
Total	0.0292	0.3128	0.2291	4.4000e-004	0.0935	0.0141	0.1076	0.0500	0.0130	0.0630	0.0000	39.0821	39.0821	0.0126	0.0000	39.3981

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	2.0000e-004	3.0000e-005	0.0000	1.0700e-003	0.0000	1.0700e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0612	0.0612	0.0000	1.0000e-005	0.0641
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	1.2900e-003	0.0120	3.0000e-005	0.2022	2.0000e-005	0.2023	0.0206	2.0000e-005	0.0206	0.0000	2.3212	2.3212	9.0000e-005	9.0000e-005	2.3503
Total	1.6800e-003	1.4900e-003	0.0120	3.0000e-005	0.2033	2.0000e-005	0.2033	0.0207	2.0000e-005	0.0207	0.0000	2.3824	2.3824	9.0000e-005	1.0000e-004	2.4144

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3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0785	0.7183	0.7527	1.2400e-003		0.0372	0.0372		0.0350	0.0350	0.0000	106.5936	106.5936	0.0255	0.0000	107.2320
Total	0.0785	0.7183	0.7527	1.2400e-003		0.0372	0.0372		0.0350	0.0350	0.0000	106.5936	106.5936	0.0255	0.0000	107.2320

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	3.0000e-005	0.0000	9.9000e-004	0.0000	9.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0563	0.0563	0.0000	1.0000e-005	0.0590
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1500e-003	3.9600e-003	0.0367	8.0000e-005	0.6202	6.0000e-005	0.6203	0.0632	5.0000e-005	0.0633	0.0000	7.1183	7.1183	2.8000e-004	2.8000e-004	7.2075
Total	5.1500e-003	4.1400e-003	0.0367	8.0000e-005	0.6212	6.0000e-005	0.6212	0.0633	5.0000e-005	0.0634	0.0000	7.1747	7.1747	2.8000e-004	2.9000e-004	7.2665

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0785	0.7183	0.7527	1.2400e-003		0.0372	0.0372		0.0350	0.0350	0.0000	106.5935	106.5935	0.0255	0.0000	107.2319
Total	0.0785	0.7183	0.7527	1.2400e-003		0.0372	0.0372		0.0350	0.0350	0.0000	106.5935	106.5935	0.0255	0.0000	107.2319

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	3.0000e-005	0.0000	9.9000e-004	0.0000	9.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0563	0.0563	0.0000	1.0000e-005	0.0590
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1500e-003	3.9600e-003	0.0367	8.0000e-005	0.6202	6.0000e-005	0.6203	0.0632	5.0000e-005	0.0633	0.0000	7.1183	7.1183	2.8000e-004	2.8000e-004	7.2075
Total	5.1500e-003	4.1400e-003	0.0367	8.0000e-005	0.6212	6.0000e-005	0.6212	0.0633	5.0000e-005	0.0634	0.0000	7.1747	7.1747	2.8000e-004	2.9000e-004	7.2665

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2900e-003	0.0575	0.0650	1.1000e-004		2.8000e-003	2.8000e-003		2.6300e-003	2.6300e-003	0.0000	9.2722	9.2722	2.2100e-003	0.0000	9.3273
Total	6.2900e-003	0.0575	0.0650	1.1000e-004		2.8000e-003	2.8000e-003		2.6300e-003	2.6300e-003	0.0000	9.2722	9.2722	2.2100e-003	0.0000	9.3273

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.0000e-005	0.0000	0.0000	9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	4.7200e-003	4.7200e-003	0.0000	0.0000	4.9500e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.0000e-004	2.9000e-003	1.0000e-005	0.0539	0.0000	0.0539	5.5000e-003	0.0000	5.5000e-003	0.0000	0.6044	0.6044	2.0000e-005	2.0000e-005	0.6115
Total	4.2000e-004	3.1000e-004	2.9000e-003	1.0000e-005	0.0540	0.0000	0.0540	5.5100e-003	0.0000	5.5100e-003	0.0000	0.6091	0.6091	2.0000e-005	2.0000e-005	0.6164

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3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2900e-003	0.0575	0.0650	1.1000e-004		2.8000e-003	2.8000e-003		2.6300e-003	2.6300e-003	0.0000	9.2722	9.2722	2.2100e-003	0.0000	9.3273
Total	6.2900e-003	0.0575	0.0650	1.1000e-004		2.8000e-003	2.8000e-003		2.6300e-003	2.6300e-003	0.0000	9.2722	9.2722	2.2100e-003	0.0000	9.3273

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.0000e-005	0.0000	0.0000	9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	4.7200e-003	4.7200e-003	0.0000	0.0000	4.9500e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.0000e-004	2.9000e-003	1.0000e-005	0.0539	0.0000	0.0539	5.5000e-003	0.0000	5.5000e-003	0.0000	0.6044	0.6044	2.0000e-005	2.0000e-005	0.6115
Total	4.2000e-004	3.1000e-004	2.9000e-003	1.0000e-005	0.0540	0.0000	0.0540	5.5100e-003	0.0000	5.5100e-003	0.0000	0.6091	0.6091	2.0000e-005	2.0000e-005	0.6164

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0535	0.1059	0.5223	9.0000e-004	4.3468	1.1200e-003	4.3479	0.4464	1.0600e-003	0.4474	0.0000	83.8652	83.8652	5.9600e-003	4.9500e-003	85.4892
Unmitigated	0.0535	0.1059	0.5223	9.0000e-004	4.3468	1.1200e-003	4.3479	0.4464	1.0600e-003	0.4474	0.0000	83.8652	83.8652	5.9600e-003	4.9500e-003	85.4892

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	5.11	5.11	5.11	19,727	19,727
Mobile Home Park	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	54.26	54.26	54.26	209,618	209,618
Total	59.36	59.36	59.36	229,345	229,345

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Mobile Home Park	16.80	7.10	7.90	42.30	19.60	38.10	86	11	3
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.443629	0.069650	0.207187	0.154075	0.057336	0.011288	0.006778	0.008856	0.000975	0.000221	0.034425	0.001490	0.004089
Mobile Home Park	0.443629	0.069650	0.207187	0.154075	0.057336	0.011288	0.006778	0.008856	0.000975	0.000221	0.034425	0.001490	0.004089
Unrefrigerated Warehouse-No Rail	0.443629	0.069650	0.207187	0.154075	0.057336	0.011288	0.006778	0.008856	0.000975	0.000221	0.034425	0.001490	0.004089

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.1818	9.1818	1.4900e-003	1.8000e-004	9.2726
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.1818	9.1818	1.4900e-003	1.8000e-004	9.2726
NaturalGas Mitigated	4.4000e-004	3.9900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.3536	4.3536	8.0000e-005	8.0000e-005	4.3794
NaturalGas Unmitigated	4.4000e-004	3.9900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.3536	4.3536	8.0000e-005	8.0000e-005	4.3794

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	77256	4.2000e-004	3.7900e-003	3.1800e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1227	4.1227	8.0000e-005	8.0000e-005	4.1472
Mobile Home Park	4326.35	2.0000e-005	2.0000e-004	8.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2309	0.2309	0.0000	0.0000	0.2322
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.4000e-004	3.9900e-003	3.2600e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.3535	4.3535	8.0000e-005	8.0000e-005	4.3794

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	77256	4.2000e-004	3.7900e-003	3.1800e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1227	4.1227	8.0000e-005	8.0000e-005	4.1472
Mobile Home Park	4326.35	2.0000e-005	2.0000e-004	8.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2309	0.2309	0.0000	0.0000	0.2322
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.4000e-004	3.9900e-003	3.2600e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.3535	4.3535	8.0000e-005	8.0000e-005	4.3794

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	93684	8.6680	1.4000e-003	1.7000e-004	8.7537
Mobile Home Park	5553.23	0.5138	8.0000e-005	1.0000e-005	0.5189
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		9.1818	1.4800e-003	1.8000e-004	9.2726

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	93684	8.6680	1.4000e-003	1.7000e-004	8.7537
Mobile Home Park	5553.23	0.5138	8.0000e-005	1.0000e-005	0.5189
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		9.1818	1.4800e-003	1.8000e-004	9.2726

6.0 Area Detail

6.1 Mitigation Measures Area

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2075	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192
Unmitigated	1.2075	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2070					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192
Total	1.2075	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2070					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192
Total	1.2075	1.2000e-004	0.0108	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0185	0.0185	3.0000e-005	0.0000	0.0192

7.0 Water Detail

7.1 Mitigation Measures Water

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.7535	0.0255	1.0000e-004	1.4209
Unmitigated	0.7535	0.0255	1.0000e-004	1.4209

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.010429 / 0	5.2200e-003	2.3700e-003	1.0000e-005	0.0669
Mobile Home Park	0.10128 / 0	0.0507	0.0230	8.0000e-005	0.6495
Unrefrigerated Warehouse-No Rail	0 / 2.15409	0.6976	1.1000e-004	1.0000e-005	0.7045
Total		0.7535	0.0255	1.0000e-004	1.4209

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.010429 / 0	5.2200e-003	2.3700e-003	1.0000e-005	0.0669
Mobile Home Park	0.10128 / 0	0.0507	0.0230	8.0000e-005	0.6495
Unrefrigerated Warehouse-No Rail	0 / 2.15409	0.6976	1.1000e-004	1.0000e-005	0.7045
Total		0.7535	0.0255	1.0000e-004	1.4209

8.0 Waste Detail

8.1 Mitigation Measures Waste

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0365	2.1600e-003	0.0000	0.0905
Unmitigated	0.0365	2.1600e-003	0.0000	0.0905

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Mobile Home Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Unrefrigerated Warehouse-No Rail	0.1	0.0203	1.2000e-003	0.0000	0.0503
Total		0.0365	2.1600e-003	0.0000	0.0905

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Mobile Home Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Unrefrigerated Warehouse-No Rail	0.1	0.0203	1.2000e-003	0.0000	0.0503
Total		0.0365	2.1600e-003	0.0000	0.0905

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	24	168	18	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number
----------------	--------

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (11 - 25 HP)	4.9600e-003	0.0259	0.0240	2.0000e-005		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	2.3031	2.3031	3.2000e-004	0.0000	2.3111
Total	4.9600e-003	0.0259	0.0240	2.0000e-005		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	2.3031	2.3031	3.2000e-004	0.0000	2.3111

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-6.8960	0.0000	0.0000	-6.8960

Cisco Farms, Inc. Cannabis Project - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.1 Vegetation Land Change
 Vegetation Type

Initial/Final	Total CO2	CH4	N2O	CO2e
Acres	MT			
1.6 / 0	-6.8960	0.0000	0.0000	-6.8960
Grassland	-6.8960	0.0000	0.0000	-6.8960
Total	-6.8960	0.0000	0.0000	-6.8960



State Water Resources Control Board

Sent by email. No hard copy to follow.

Effective Date: 5/10/2022

WDID: 1_12CC428193

Cisco Farms, Inc.
Attn: Karl Benemann
Email: lostcoastmadman@gmail.com

FACILITY ADDRESS:
1414 Chambers Road
Petrolia CA, 95558
Humboldt County

NOTICE OF APPLICABILITY – WASTE DISCHARGE REQUIREMENTS, WATER QUALITY ORDER WQ 2019-0001-DWQ

This Notice of Applicability (NOA) provides notice that the requirements of the State Water Resources Control Board (State Water Board) *Cannabis Cultivation Policy- Principles and Guidelines for Cannabis Cultivation* (Policy), and Order WQ 2019-0001-DWQ (General Order), are applicable to the site as described below.

DISCHARGER: CISCO FARMS, INC.

WDID: 1_12CC428193	ORDER: WQ 2019-0001-DWQ
Enrollment – Type	Enrollee - WDR
Tier and Risk	Tier 1 Low Risk
Wastewater Disposal	Not Applicable
Disturbed Area (SqFt)	2000
Cultivation Area (SqFt)	1

FACILITY APNs:

104-191-001-000, 104-232-005-000, 105-101-011-000

Additional site-specific requirements are contained in this NOA. The Discharger is responsible for all the applicable requirements in the Policy, General Order, and this NOA.

If you have any further question, please contact North Coast Regional Cannabis Unit at northcoast.cannabis@waterboards.ca.gov.

APPROVED BY

Karen Mogus
Deputy Director
Division of Water Quality

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

The *Cannabis Cultivation Policy- Principles and Guidelines for Cannabis Cultivation* (Policy) and the *General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities*, Order WQ 2019-0001-DWQ (General Order) are available at <<http://www.waterboards.ca.gov/cannabis>>. The Discharger shall ensure that all site operating personnel know, understand, and comply with the requirements contained in the Policy, General Order, and this Notice of Applicability (NOA). Note that the General Order contains standard provisions, general requirements, and prohibitions that apply to all cannabis cultivation activities (Attachment A of the General Order).

Please direct submittals, discharge notifications, and questions regarding compliance and enforcement to the North Coast Regional Cannabis Unit, at (707) 576-2676 or northcoast.cannabis@waterboards.ca.gov unless otherwise directed in this document.

CONTENTS:

1. **ENROLLMENT RESPONSIBILITIES**
2. **FACILITY AND DISCHARGE DESCRIPTION**
3. **PROJECTS AND MAINTANCE OCCURING IN STREAMS AND WETLANDS**
4. **GENERAL REQUIREMENTS**
5. **TECHNICAL REPORT REQUIREMENTS**
6. **MONITORING AND REPORTING PROGRAM**
7. **ANNUAL FEE**
8. **TERMINATION OF COVERAGE UNDER THE GENERAL ORDER**
9. **REGION SPECIFIC REQUIREMENTS**

Additional Cannabis Water Quality Resources

The links below are available on the last page of this document

Water Boards' Cannabis Cultivation Webpage	Water Quality Fees Webpage
Cannabis Policy	Water Quality Annual Fee Invoice Lookup
Cannabis General Order	Facility-At-A-Glance Report
Rural Roads Handbook	Cultivation Permitting Agency Webinar

For translation assistance, please contact the following:

Spanish: Para obtener más información en español por favor contáctenos al teléfono (916) 341-5265 o vía email a: OPP-LanguageServices@Waterboards.ca.gov.

Hmong: Rau kev npaub ntxiv ua lus Hmoob, thov txuas lus nrog peb ntawm xov tooj (916)-341-5265 los sis email: OPP-LanguageServices@Waterboards.ca.gov.

1. ENROLLMENT RESPONSIBILITIES

Cisco Farms, Inc. (hereafter "Discharger") submitted information, or updated enrollment information, for discharges of waste associated with cannabis cultivation at or near 1414 Chambers Road Petrolia CA, 95558. The Discharger's cannabis cultivation activities must comply with the requirements of the Policy and General Order before the winter period or the Discharger must contact the Regional Board as soon as possible prior to the winter period if compliance cannot be met. You are hereby assigned waste discharger identification (WDID) number 1_12CC428193.

The Discharger is responsible for all applicable requirements in the Policy, General Order, and this NOA, including submittal of all required reports. The Discharger is the sole person with legal authority to, among other things, change information submitted to obtain regulatory coverage under the General Order; request changes to enrollment status, including tier and risk designation; and terminate regulatory coverage. The Discharger may designate a third-party representative/agent to represent them in issues related to the General Order but must do so in writing. The Regional Water Quality Control Board (Regional Water Board) or the State Water Board (collectively Water Boards) will hold the Discharger liable for any noncompliance with the Policy, General Order, or this NOA. Pursuant to the General Order, if the Discharger is not the landowner, the Discharger must have express written permission of the landowner authorizing the cannabis cultivation activities. If the landowner contests this NOA and the Discharger cannot obtain consent, the Discharger will be required to submit a request for termination of coverage under the General Order, as described in Section 5 below.

This NOA does not provide authorization to cultivate cannabis; such authorization is provided through a license from the California Department of Cannabis Control, required permits from your local jurisdiction (city or county), and an agreement or exemption from agreement from the California Department of Fish and Wildlife. The Policy and General Order, and by reference this NOA, require that you obtain all appropriate permits from other agencies prior to cultivating cannabis.

2. FACILITY AND DISCHARGE DESCRIPTION

The information submitted by the Discharger indicates:

1. the disturbed area is less than 1 acre (43,560 square feet)
2. no portion of the disturbed area is within the required riparian setbacks
3. no portion of the disturbed area is located on a slope greater than 30 percent

Therefore, the activities are classified as Tier 1 Low Risk and meet the requirements of the General Order.

If site conditions described above change, you must contact the North Coast Regional Cannabis Unit listed at the top of page 2.

3. PROJECTS AND MAINTANCE OCCURING IN STREAMS AND WETLANDS

The Policy and General Order require that, prior to conducting any work in streams or wetlands, the Discharger obtain water quality certification from the Water Boards and other required permits from other agencies (e.g., a Clean Water Act section 404 permit from the United States Army Corps of Engineers, a Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife, and other local permits). Enrollment in the General Order requires that the Discharger obtain water quality certification for any such work, but this NOA does not provide the necessary certification. If the Discharger proposes or requires work in streams or wetlands, they must apply for water quality certification by filling out and submitting a separate application for that work. Additional application

and monitoring fees will apply. Please contact the North Coast Regional Cannabis Unit for application forms, fee information, and instructions.

4. GENERAL REQUIREMENTS

The General Order requires that all applicable best practicable treatment or control (BPTC) measures listed in Attachment A of the General Order be implemented before the onset of the winter period November 15 to April 1. Dischargers that cannot implement all applicable BPTC measures by the onset of the winter period shall submit to the Regional Water Board a Site Management Plan that includes a time schedule and scope of work for use by the Regional Water Board in developing a compliance schedule as described in General Requirement No. 33 in Attachment A of the General Order.

The Discharger shall notify the Regional Water Board in writing of any proposed change in the method of waste disposal for irrigation tailwater, hydroponic wastewater, or other miscellaneous industrial wastewaters. Note the following:

- i. Discharge to a permitted wastewater treatment collection system and facility that accepts cannabis cultivation wastewater is permissible under the General Order. A will-serve letter (or equivalent) from the sewer agency is sufficient to demonstrate that the discharge is in compliance with wastewater system requirements and shall be made available to the Water Boards upon request.
- ii. The Discharger shall retain, for a minimum of five years, appropriate documentation for any industrial wastewater collected to a storage tank for disposal at a permitted wastewater facility that accepts cannabis cultivation wastewater. Documentation shall be made available to the Water Boards upon request.
- iii. The Discharger must obtain separate regulatory authorization (e.g., site-specific Waste Discharge Requirements (WDRs), conditional waiver of WDRs, or other permit mechanism) from the Regional Water Board prior to implementing alternative waste disposal methods, such as onsite wastewater treatment systems, including, but not limited to, a septic/leach field system, evaporation ponds, or onsite landscape irrigation using treated wastewater. Additional monitoring and reporting requirements may be necessary to demonstrate compliance with the General Order and the Regional Water Board's Basin Plan.

During reasonable hours, the Discharger shall allow the Water Boards, California Department of Fish and Wildlife, CAL FIRE, and any other authorized representatives of the Water Boards, upon presentation of a badge, employee identification card, or similar credentials, to:

- i. enter premises and facilities where cannabis is cultivated; where water is diverted, stored, or used; where wastes are treated, stored, or disposed; or in which any records are kept;
- ii. access and copy any records required to be kept under the terms and conditions of the Policy and General Order;
- iii. record audio and video, inspect, and/or photograph any cannabis cultivation sites, and associated premises, facilities, monitoring equipment or device, practices, or operations regulated or required by the Policy and General Order; and

- iv. sample, monitor, photograph, and record audio and video of site conditions, any discharge, waste material substances, or water quality parameters at any location for the purpose of ensuring compliance with the Policy and General Order.

5. TECHNICAL REPORT REQUIREMENTS

The technical reports described below shall be submitted through the Water Boards Cannabis Cultivation Programs Portal by completing a *General Order Technical Reporting* survey. See Section 8 for required reporting before termination of General Order coverage.

A Site Management Plan, due by 7/31/2021, or within 90 days of notifying the North Coast Regional Cannabis Unit of planned material change in activity, character, location, or volume of discharge (i.e. change in cultivation, disturbed area, wastewater disposal method, etc.) as required by General Order Provision C.1.a, Provision C.2.i, and Attachment A, Section 5. Attachment D of the General Order provides guidance on the contents of the Site Management Plan.

6. MONITORING AND REPORTING PROGRAM

The Discharger shall comply with the Monitoring and Reporting Program (MRP). Attachment B of the General Order provides guidance on the contents for the annual reporting requirement. Annual reports shall be submitted through the Water Boards Cannabis Cultivation Programs Portal by completing a *Online Cannabis Water Quality Monitoring & Reporting Program* survey by March 1 following the year being monitored. The Discharger shall comply with the MRP and any future revisions as specified by the Regional Water Board Executive Officer, the State Water Board Division of Water Quality Deputy Director, or the State Water Board Chief Deputy Director.

7. ANNUAL FEE

If applicable you will receive an invoice annually until coverage under this General Order is formally terminated. Please visit <http://www.waterboards.ca.gov/resources/fees/water_quality/> and click on the latest Water Quality Fee Schedule (for example, for fiscal year 2020-2021, the fee schedule is called 'FY 2020-2021 Water Quality Fee Schedule'). California Code of Regulation Title 23 Division 3 Chapter 9 Article 1 Section 2200.7, 'Annual Fee Schedule for Cannabis Cultivation.' Please note that the Fee Schedule is reviewed annually and future fees may be invoiced at different rates.

Annual fees are assessed on a fiscal year basis (July 1 through June 30). Invoices are sent by the State Water Board roughly midway through each fiscal year, usually in January. Please do not submit payments without receiving an invoice. If you have questions or concerns about your fees please contact the Water Boards Fee Branch at FeeBranch@waterboards.ca.gov or (916) 341-5247. The fee is due and payable on an annual basis until coverage under the General Order is formally terminated. Instructions for requesting termination of coverage appear in Section 8.

To terminate coverage, the Discharger must submit a Notice of Termination, including a Site Closure Report, at least 90 days prior to termination of activities, and a final Annual Monitoring Report. See Termination of Coverage Under the General Order section below.

8. TERMINATION OF COVERAGE UNDER THE GENERAL ORDER

Dischargers who wish to terminate coverage under the General Order must submit a Notice of Termination and Site Closure Report. The Notice of Termination and Site Closure Report shall be submitted through the Water Boards Cannabis Cultivation Programs Portal

<<https://public2.waterboards.ca.gov/cgo>>by completing a *Cannabis General Order Termination Request Form* survey.

Dischargers enrolled under Waste Discharge Requirements in the General Order (i.e., non-Waiver enrollees) must also submit a final Annual Monitoring Report. The final Annual Monitoring Report shall be submitted by completing an *Online Cannabis Water Quality Monitoring & Reporting Program* survey.

The Regional Water Board reserves the right to inspect the site before approving a request for termination of coverage. Attachment C of the General Order includes the *NOT* form and Attachment D of the General Order provides guidance on the contents of the *Site Closure Report*.

9. REGION SPECIFIC REQUIREMENTS

Dischargers shall comply with all applicable federal, state, and local laws, regulations, and permitting requirements. This includes any applicable Regional Water Board Orders or Regional Water Quality Control Plan (Basin Plan) requirements, including prohibitions and/or water quality objectives governing the discharge. In the event of duplicate or conflicting requirements, the most stringent requirement shall apply.

You can access your regions Basin Plan by visiting your local Regional Water Board's website at <<https://www.waterboards.ca.gov/northcoast/>>.

The Discharger shall also comply with the provisions of the North Coast Regional Water Board's Supplement to the General Order Annual Monitoring and Reporting Program (Regional Supplement), which independently appears as Investigative Order No. R1-2019-0023, issued by the Regional Water Board Executive Officer on March 22, 2019. The information required by Order No. R1-2019-0023 will be submitted while completing the *Online Cannabis Water Quality Monitoring & Reporting Program* survey

Individuals Notified of Notice of Applicability Issuance

Cannabis Regulatory Unit
State Water Resources Control Board
dwq.cannabis@waterboards.ca.gov

North Coast Water Quality Control Board
Northcoast.Cannabis@Waterboards.Ca.Gov

Cliff Johnson, Senior Planner
Humboldt County
Cjohnson@Co.Humboldt.Ca.Us

220510_1L_1_12CC428193_Cisco_Farms_NOA_HL;APPROVAL#818

Additional Cannabis Water Quality Resources

Water Boards' Cannabis Cultivation Webpage:

https://www.waterboards.ca.gov/water_issues/programs/cannabis/cannabis_outreach.html

Cannabis Policy:

https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

Cannabis General Order:

https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2019/wqo2019_0001_dwq.pdf

Rural Roads Handbook:

http://www.pacificwatershed.com/sites/default/files/handbook_chapter_download_page.pdf

Cultivation Permitting Agency Webinar: <https://youtu.be/kVbIKnFRZy8>

Water Quality Fees Webpage: https://www.waterboards.ca.gov/resources/fees/water_quality/

Water Quality Annual Fee Invoice Lookup:

<http://infofees.waterboards.ca.gov/FeeInfo/DischargerInvoice.aspx>

Facility-At-A-Glance Report:

<https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportName=facilityAtAGlance&inCommand=reset>

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

REGION 1 – NORTHERN REGION
619 2nd Street
Eureka, CA 95501



LAKE OR STREAMBED ALTERATION AGREEMENT

NOTIFICATION NO. EPIMS-HUM-18009-R1C
Unnamed Tributary to Mill Creek, Tributary to the Mattole River and the Pacific Ocean

Karl Benemann
Benemann Stream Crossings and Water Diversion Project
3 Encroachments

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Karl Benemann (Permittee).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on May 3, 2021 that the Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, the Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, the Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located within the Lower Mattole River watershed, approximately 1 ½ miles northeast of the town of Petrolia, County of Humboldt, State of California; Section 02, T02S, R02W, Humboldt Base and Meridian, in the Petrolia U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Number 105-101-011-000; latitude 40.3223 N and longitude 124.2563 W at the point of diversion (POD).

PROJECT DESCRIPTION

The project is limited to three encroachments (Table 1). One encroachment is for water diversion from an unnamed tributary to Mill Creek. Water is diverted for domestic use and agricultural cattle watering. Work for the water diversion will include use and maintenance of the water diversion infrastructure. The two other proposed

encroachments are to upgrade failing and undersized stream crossings. Work for these encroachments will include excavation, removal of the failing crossings, replacement with new properly sized crossings, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
POD-1	40.3223, -124.2563	<p>Water diversion from unnamed tributary to Mill Creek for domestic and cattle water use only.</p> <p>Domestic Use Water diversion for domestic use year-round, limited to 400 gallons per day (gpd) during the Seasonal Diversion Minimization.</p> <p>Cattle Water Water diversion for ranching purposes. Diversion period is January – July annually, limited to 500 gallons per day (gpd).</p> <p>Combined allowance from January – July is 900 gallons per day (gpd) for domestic and cattle water.</p> <p>Permittee shall observe Seasonal Diversion Minimization from April 1 – October 31 annually for domestic use; 80% bypass required at all times for all purposes (domestic and cattle). The maximum instantaneous diversion rate from the water intake shall not exceed three (3) gallons per minute (gpm) at any time for any use.</p>
Crossing-1 (STX-2)	40.0324, -124.2655	<p>Replace failing and undersized 48-inch HDPE culvert with a minimum 72-inch diameter culvert or equivalent arched culvert. Install to grade and rock armor as necessary.</p>
Crossing-2 (STX-3)	40.3197, -124.2602	<p>Replace failing and undersized 36-inch HDPE culvert with a minimum 60-inch diameter culvert or equivalent arched culvert. Install to grade and rock armor as necessary.</p>

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include Chinook Salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*O. kisutch*), Steelhead Trout (*O. mykiss*), Western Brook Lamprey (*Lampetra richardsoni*), Pacific Lamprey (*Entosphenus tridentata*), Southern Torrent Salamander (*Rhyacotriton variegatus*), Coastal Giant Salamander (*Dicamptodon tenebrosus*), Foothill Yellow-legged Frog (*Rana boylei*), Coastal Tailed Frog (*Ascaphus truei*), Northwest Pond Turtle (*Actinemys*

marmorata) amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include:

Impacts to water quality:

- Reduced instream flow; and
- Temporary increase in fine sediment transport;

Impacts to bed, channel, or bank and direct effects on fish, wildlife, and their habitat:

- Direct impacts on benthic organisms;

Impacts to natural flow and effects on habitat structure and process:

- Cumulative effect when other diversions on the same stream are considered;
- Diversion of flow from activity site;
- Direct and/or incidental take;
- Indirect impacts;
- Impediment of up- or down-stream migration;
- Water quality degradation; and
- Damage to aquatic habitat and function.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

The Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. The Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. The Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of the Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Change of Conditions and Need to Cease Operations. If conditions arise, or change, in such a manner as to be considered deleterious by CDFW to the stream or wildlife, operations shall cease until corrective measures approved by CDFW are taken. This includes new information becoming available that indicates that bypass flows and diversion rates provided in this agreement are not providing adequate protection to keep aquatic life downstream in good condition or to avoid “take” or “incidental take” of federal or State listed species.

- 1.4 Adherence to Existing Authorizations. All water diversion facilities that the Permittee owns, operates, or controls shall be operated and maintained in accordance with current law and applicable water rights.
- 1.5 Notification of Conflicting Provisions. The Permittee shall notify CDFW if the Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact the Permittee to resolve any conflict.
- 1.6 Project Site Entry. Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with the Agreement.
- 1.7 CDFW Notification of Work Initiation and Completion. The Permittee shall contact CDFW within the seven-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than seven (7) days after the project is fully completed.
- 1.8 Agreement Compliance. The proposed work shall comply with all measures included in this Agreement. **Failure to comply with these measures may result in suspension or revocation of this Agreement.**

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, the Permittee shall implement each measure listed below.

- 2.1 Permitted Project Activities. Except where otherwise stipulated in this Agreement, all work shall be in accordance with the Permittee Notification received on May 3, 2021, together with all maps, BMP's, photographs, drawings, and other supporting documents submitted with the Notification.
- 2.2 Incidental Take. This Agreement does not allow for the "take," or "incidental take" of any federal or State listed threatened or endangered listed species.

Project Timing

- 2.3 Work Period. All work, not including authorized diversion of water, shall be confined to the period **June 1 through October 31** of each year. Work within the active channel of a stream shall be restricted to periods of dry weather. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease, and all necessary erosion control measures shall be implemented prior to the onset of precipitation.

- 2.4 Work Completion. The proposed work **shall be completed by prior to the expiration of this Agreement's term**. A notice of completed work, including photographs of each site, shall be submitted to CDFW within seven (7) days of project completion.
- 2.5 Extension of the Work Period. If weather conditions permit, and the Permittee wishes to extend the work period before June 1 or after October 31, a written request shall be made to CDFW at least five (5) working days before the **proposed work period variance. Written approval (letter or e-mail) for the proposed time extension must be received from CDFW prior to activities beginning before June 1 or continuing past October 31.**
- 2.6 Avoidance of Nesting Birds. Fish and Game Code sections 3503 and 3503.5 prohibits the taking or destroying of native bird's nests or eggs. Vegetation maintenance or removal (e.g., clearing and grubbing) shall occur between September 1 and March 15. Removal areas should be managed once cleared to reduce nesting potential during the breeding season.

Vegetation Management

- 2.7 Minimum Vegetation Removal. No native riparian vegetation shall be removed from the bank of the stream, except where authorized by CDFW. Permittee shall limit the disturbance or removal of native vegetation to the minimum necessary to achieve design guidelines and standards for the Authorized Activity. Permittee shall take precautions to avoid damage to vegetation outside these work area.

Water Diversion

Domestic and Cattle Use

- 2.8 Maximum Diversion Rate. The maximum instantaneous diversion rate from the water intake shall not exceed **three (3) gallons per minute (gpm)** at any time.
- 2.9 Bypass Flow. The Permittee shall pass **80% of the flow** at all times to keep all aquatic species including fish and other aquatic life in good condition below the point of diversion.
- 2.10 Seasonal Diversion Minimization: Domestic Use. No more than **400 gallons per day** shall be diverted during the low flow season from **April 1 to November 15** of each year. Water shall be diverted only if the Permittee can adhere to conditions 2.8 and 2.9 of this Agreement.
- 2.11 Seasonal Diversion Minimization: Cattle Use. No more than **500 gallons per day** shall be diverted during the Active Diversion Period of January – July annually. No water for cattle ranching shall be diverted between August 1 – December 31 of each year. Water shall be diverted only if the Permittee can adhere to conditions 2.8 and 2.9 of this Agreement.

2.12 Measurement of Diverted Flow. Permittee shall install and maintain an adequate measuring device (i.e., flow totalizer) for measuring the instantaneous and cumulative rate of diversion. This measurement shall begin as soon as this Agreement is signed by the Permittee. The device shall be installed within the in-line flow of diverted water. The Permittee shall maintain records of diversion, and provide information including, but not limited to the following:

2.12.1 The date diversion occurred.

2.12.2 The amount of water used per week for domestic and cattle purposes, recorded individually.

2.12.3 At CDFW's request, Permittee shall make available for review any diversion records required by the State Water Resources Control Board.

2.13 Water Management Plan. The permittee shall submit a Water Management Plan no later than **sixty days** from the time this Agreement is made final that describes how compliance will be achieved under this Agreement. The Water Management Plan shall include details on water storage, water conservation, or other relevant material to maintain water needs in coordination with Seasonal Diversion Minimization and/or forbearance and bypass flow requirements. The Water Management Plan shall include a brief narrative describing water use on the property, including measurement of water use and photographs of the water flow totalizer at the beginning and end of each season, photographs to support the narrative, and water use calculations to ensure compliance with this Agreement.

Water Diversion Facility

2.14 Intake Structure. No polluting materials (e.g., particle board, plastic sheeting, bentonite) shall be used to construct or screen, or cover the diversion intake structure.

2.15 Intake Structure Placement. Infrastructure installed in the streambed (e.g., cistern or spring box) shall not exceed 20 percent of the active channel width and shall not be located in the deepest portion of the channel. The depth of the intake shall be no greater than six inches below the streambed. The diversion shall be located no less than 25 feet from the spring head (i.e., emergence of surface water).

2.16 Intake Screening. The Permittee shall regularly inspect, clean, and maintain screens in good condition.

2.16.1 A water intake screen with round openings shall not exceed 3/32-inch diameter; a screen with square openings shall not exceed 3/32-inch measured diagonally; and a screen with slotted openings shall not exceed 0.069 inches in width. Slots must be evenly distributed on the screen area.

- 2.16.2 The screen shall be designed to distribute the flow uniformly over the entire screen area.
- 2.17 Intake Shall Not Impede Aquatic Species Passage. The water diversion structures shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life.
- 2.18 Exclusionary Devices. Permittee shall keep the diversion structures (e.g., cistern) covered at all times to prevent the entrance and entrapment of amphibians and other wildlife.
- 2.19 Seasonal Diversion Disconnection – Cannabis Irrigation. Permittee shall disconnect all water lines from the point of diversion (e.g., cistern, spring box, etc.) and water storage facilities at the end of each diversion season. All water lines shall be removed from the active channel.
- 2.20 Heavy Equipment Use. No heavy equipment shall be used in the excavation or replacement of the existing water diversion structure. The Permittee shall use hand tools or other low impact methods of removal/replacement. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

Diversion to Storage

- 2.21 Water Storage. All water storage facilities (WSF; e.g., reservoirs, storage tanks, and bladders tanks) should be located outside bed, bank or channel of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent entry by wildlife. Permittee shall cease all water diversion at the point of diversion when WSFs are filled to capacity.
- 2.22 Storage Maintenance. Water storage facilities shall have a float valve to shut off the diversion when tanks are full to prevent overflow. Water shall not leak, overflow, or overtop WSFs at any time. Permittee shall regularly inspect all water storage facilities and infrastructure used to divert water to storage and repair any leaks.
- 2.23 Reservoirs/Ponds. Shall be appropriately designed, sized, and managed to contain any diverted water in addition to precipitation and storm water runoff, without overtopping.
- 2.24 Limitations on Impoundment and Use of Diverted Water. The Permittee shall impound and use water in accordance with a valid water right, including any limitations on when water may be impounded and used, the purpose for which it may be impounded and used, and the location(s) where water may be impounded and used.

- 2.25 Water Conservation. The Permittee shall make best efforts to minimize water use, and to follow best practices for water conservation and management.
- 2.26 State Water Code. This Agreement does not constitute a valid water right. The Permittee shall comply with State Water Code sections 5100 and 1200 et seq. as appropriate for the water diversion and water storage.

Stream Crossings

- 2.27 Stream Protection. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other deleterious material from project activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.
- 2.28 Equipment Maintenance. Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants, or hydraulic fluids shall not take place within stream bed, channel, and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment shall not be stored within stream bed, channel, and bank.
- 2.29 Hazardous Spills. If at any time any material which could be hazardous or toxic to aquatic life enters a stream, the Permittee shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550, and immediately initiate clean-up activities. Permittee shall notify CDFW at 707-445-6493 and consulted regarding clean-up procedures as soon as practicable, but no later than 24 hours after the spill.
- 2.30 Prohibition of Live Stream Work. No work is authorized in a live flowing stream. All work shall be conducted when the stream is dry. Permittee shall notify CDFW if it determines that work in a live flowing stream is required to complete a project and will submit a dewatering plan.
- 2.31 Dewatering.
- 2.31.1 Stream Diversion. Only when work in a flowing stream is unavoidable (e.g., perennial streams), prior to the start of construction, Permittee shall isolate the work area from the flowing stream. To isolate the work area, water-tight cofferdams shall be constructed upstream and downstream of the work area, and water diverted through a suitably sized pipe. Water shall be diverted from upstream of the upstream cofferdam, and discharge downstream of the downstream cofferdam. Cofferdams and the stream diversion system shall remain in place and functional throughout the construction period. Cofferdams or stream diversions that fail for any reason

shall be repaired immediately.

- 2.31.2 Maintain Aquatic Life. When any cofferdam or other artificial obstruction is being constructed, maintained, or placed in operation, Permittee shall allow sufficient water at all times to pass downstream to maintain aquatic life below the obstruction pursuant to Fish and Game Code §5937.
- 2.31.3 Stranded Aquatic Life. The Permittee shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include hand nets, dip nets, buckets, and/or by hand. Captured aquatic life shall be released immediately in the closest suitable aquatic habitat adjacent to the work site. Permittee shall submit detailed information regarding species that were stranded and relocated with the Project Inspection Report.
- 2.31.4 Minimize Turbidity and Siltation. Permittee shall use only clean (washed), non-erodible materials, such as rock or sandbags that do not contain soil or fine sediment, to construct any temporary stream flow bypass. Permittee shall divert stream flow around the work site in a manner that minimizes turbidity and siltation and does not result in erosion or scour downstream of the diversion.
- 2.31.5 Remove any Materials upon Completion. Permittee shall remove all materials used for the temporary stream flow bypass after the Authorized Activity is completed.
- 2.31.6 Restore Normal Flows. Permittee shall restore normal flows to the effected stream immediately upon completion of work at that location.
- 2.32 Excavated Fill. Excavated fill material shall be placed in a stable upland location where it cannot deliver to a stream or wetland. To minimize the potential for material to enter the watercourse during the winter period, all excavated and relocated fill material shall be contoured (to drain water) and compacted to effectively incorporate and stabilize loose material into existing road and/or landing features.
- 2.33 Runoff from Steep Areas. The Permittee shall ensure that runoff (concentrated flow) from steep, erodible surfaces will be slowed and diverted into stable areas with little erosion potential or contained behind erosion control structures. Erosion control structures such as straw bales and/or siltation control fencing shall be placed and maintained until the threat of erosion ceases. Frequent water bars shall be placed on dirt roads, heavy equipment tracks, or other work trails to control erosion.
- 2.34 Culvert Installation.

- 2.34.1 If the project is located in a moderate to very high Fire Hazard Severity Zone as designated by CAL FIRE, culvert materials should consist of corrugated metal pipe (CMP). Use of High-Density Polyethylene (HDPE) pipe is not recommended.
- 2.34.2 Existing fill material in the crossing shall be excavated down vertically to the approximate original channel and outwards horizontally to the approximate crossing hinge points (transition between naturally occurring soil and remnant temporary crossing fill material) to remove any potential unstable debris and voids in the older fill prism.
- 2.34.3 Culvert shall be installed to grade (not perched or suspended), aligned with the natural stream channel, and extend lengthwise completely beyond the toe of fill. If culvert cannot be set to grade, it shall be oriented in the lower third of the fill face, and a downspout or appropriately-sized energy dissipator (e.g., boulders, riprap, or rocks) shall be installed above or below the outfall as needed to effectively prevent stream bed, channel, or bank erosion (scouring, headcutting, or downcutting). The Permittee shall ensure basins are not constructed, and channels shall not be widened at culvert inlets.
- 2.34.4 Culvert bed shall be composed of either compacted rock-free soil or crushed gravel. Bedding beneath the culvert shall provide for even distribution of the load over the length of the culvert and allow for natural settling and compaction to help the culvert seat into a straight profile. The crossing backfill materials shall be free of rocks, limbs, or other debris that could allow water to seep around the culvert and shall be compacted.
- 2.34.5 Culvert inlet/outlet (including the outfall area) and fill faces shall be armored where stream flow, road runoff, or rainfall energy is likely to erode fill material and the outfall area.
- 2.34.6 Permanent culverts shall be sized to accommodate the estimated 100-year flood flow (i.e., ≥ 1.0 times the width of the bankfull channel width or the 100-year flood size, whichever is greater), including debris, culvert embedding, and sediment loads.

2.35 Crossing Maintenance

- 2.35.1 The placement of armoring shall be confined to the work period when the stream is dry or at its lowest flow.
- 2.35.2 No heavy equipment shall enter the wetted stream channel.
- 2.35.3 No fill material, other than clean (washed) rock, shall be placed in the

stream channel.

2.35.4 Rock shall be sized to withstand washout from high stream flows and extend above the ordinary high-water level.

2.35.5 Rock armoring shall not constrict the natural stream channel width and shall be keyed into a footing trench with a depth sufficient to prevent instability.

- 2.36 Road Approaches. The Permittee shall treat road approaches to new or re-constructed permanent stream crossings to minimize erosion and sediment delivery to the stream. Permittee shall ensure road approaches are hydrologically disconnected to the maximum extent feasible to prevent sediment from entering the stream crossing site, including when a stream crossing is being constructed or reconstructed. Road approaches shall be armored from the stream crossing to the nearest effective water bar or point where road drainage does not drain to the stream crossing, with durable rock.
- 2.37 Project Inspection. The Project shall be inspected by a California licensed engineer, or other qualified professional with appropriate license or qualifications, to ensure the stream crossings were constructed as designed. A copy of the **Project Inspection Report**, including photographs of each site, shall be submitted to CDFW within 90 days of completion of this project.

Erosion Control and Pollution

- 2.38 Erosion Control. Permittee shall use erosion control measures throughout all work phases where sediment runoff could enter a stream, lake, or wetland (i.e., Waters of the State).
- 2.39 Seed and Mulch. Upon completion of construction operations and/or the onset of wet weather, Permittee shall stabilize exposed soil areas within the work area by applying mulch and seed. Permittee shall utilize vegetative (e.g., seeding) or other non-vegetative methods such as jute mat, coir mat, wood chip mat, straw mat or wattle, straw mulch, native duff (leaves, needles, fine twigs, etc.), or lopped native slash to protect and stabilize soils. Straw mulching shall utilize at least 2 to 4 inches of clean straw (such as rice, barley, wheat) or weed-free straw. Seeding shall use regional native seed or non-native seed that is known not to persist or spread [e.g., barley (*Hordeum vulgare*), or wheat (*Triticum aestivum*)]. No known invasive grass seed such as annual or perennial ryegrass (*Lolium multiflorum* or *L. perenne*, which are now referred to as *Festuca perennis*), shall be used.
- 2.40 Erosion and Sediment Barriers. Permittee shall monitor and maintain all erosion and sediment barriers in good operating condition throughout the work period and the following rainy season, defined herein to mean **October 31 through June 1**. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged sediment fencing, coir logs, coir rolls, and/or

straw bale barriers. If the sediment barrier fails to function as designed, Permittee shall employ corrective measures, and notify CDFW immediately.

- 2.41 Prohibition on Use of Monofilament Netting. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not use any erosion control materials that contain synthetic (e.g., plastic or nylon) monofilament netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.
- 2.42 Site Maintenance. Permittee shall be responsible for site maintenance including, but not limited to, re-establishing erosion control to minimize surface erosion and ensuring drainage structures and stream banks remain sufficiently stable.
- 2.43 Cover Spoil Piles. Permittee shall have readily available erosion control materials such as wattles, natural fiber mats, or plastic sheeting, to cover and contain exposed spoil piles and exposed areas to prevent sediment from eroding into a stream, lake, or wetland (i.e., Waters of the State). Permittee shall apply and secure these materials prior to rain events to prevent loose soils from entering a stream, lake, or wetland (i.e., Waters of the State).
- 2.44 No Dumping. Permittee shall not deposit, permit to pass into, or place where it can pass into a stream, lake, or wetland (i.e., Waters of the State) any material deleterious to fish and wildlife, or abandon, dispose of, or throw away within 150 feet of a stream, lake, or wetland (i.e., Waters of the State) any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

3. Reporting Measures

Permittee shall meet each reporting requirement described below. All reports shall be submitted by e-mail to CDFW at EPIMS.R1C@wildlife.ca.gov.

- 3.1 Notice of Work Initiation. The Permittee shall contact CDFW within the seven-day period preceding the beginning of work permitted by this Agreement (condition 1.7). Information to be disclosed shall include Agreement number, and the anticipated start date.
- 3.2 Work Completion. The proposed work **shall be completed by prior to the expiration of this Agreement's term**. A notice of completed work (condition 2.4), with supplemental photos, shall be submitted to CDFW **within seven (7) days** of project completion.
- 3.3 Measurement of Diverted Flow. Copies of the **Water Diversion Records** (condition 2.12) shall be submitted to CDFW no later than **March 31** of each year beginning in **2023**.

- 3.4 Water Management Plan. The Permittee shall submit a **Water Management Plan** (condition 2.13) within **60 days** from the effective date of this agreement.
- 3.5 Project Inspection. The Permittee shall submit the **Project Inspection Report** (condition 2.37) to CDFW.

CONTACT INFORMATION

Written communication the Permittee or CDFW submits to the other shall be delivered to the address below unless the Permittee or CDFW specifies otherwise.

To Permittee:

Karl Benemann
1414 Chambers Road
Petrolia, CA 95558
EPIMS-HUM-18009-R1C
Benemann Stream Crossings and Water Diversion Project
ciscofarms707@gmail.com

To CDFW:

Department of Fish and Wildlife
Northern Region
619 Second Street
Eureka, California 95501
EPIMS.R1C@wildlife.ca.gov
Joshua.Gruver@wildlife.ca.gov
Attn: Lake and Streambed Alteration Program
Notification #EPIMS-HUM-18009-R1C

LIABILITY

The Permittee shall be solely liable for any violation of the Agreement, whether committed by the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of or require the Permittee to proceed with the project. The decision to proceed with the project is the Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that the Permittee or any person acting on behalf of the Permittee, including its officers,

employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide the Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide the Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to the Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against the Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

The Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and the Permittee. To request an amendment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by the Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), the Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, the Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If the Permittee fails to submit a request to extend the Agreement prior to its expiration, the Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC section 1605(f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after the Permittee signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall **expire five years** from date of execution, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. The Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of the Permittee, the signatory hereby acknowledges that he or she is doing so on the Permittee's behalf and represents and warrants that he or she has the authority to legally bind the Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If the Permittee begins or completes a project different from the project the Agreement authorizes, the Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

Through the electronic signature by the permittee or permittee's representative as evidenced by the attached concurrence from CDFW's Environmental Permit Information Management System (EPIMS), the permittee accepts and agrees to comply with all provisions contained herein.

The EPIMS concurrence page containing electronic signatures must be attached to this agreement to be valid.



California Department of
Fish and Wildlife

Permit Details

Permit: EPIMS-HUM-18009-R1C - Chambers Rd Ranch Agreement - 2021

Status: Underway
Region: Region 1 (Coastal)
Permittee Organization: Cisco Farms, Inc.
CDFW Contact: Joshua Gruver

Standard Agreement

Signature Page

This Standard Agreement is being issued to:

Karl Benemann

Final Standard Agreement: EPIMS-HUM-18009-R1C_Final_Standard_Agreement.pdf
 Open and print the attached PDF file.

Exhibits

Concurrence

I am the applicant or I have the authority to sign for the applicant. By my signature, I accept and agree to comply with all the provisions contained herein.

Final Agreement Effective Date: 06/07/2022

Permittee Electronic Signature: Karl Benemann
 First and Last Name

Date Signed: 06/07/2022

Department of Fish and Wildlife

CDFW Electronic Signature: Angela Liebenberg

CDFW Representative Title: Senior Environmental Scientist (Supervisor)

Date Signed: 06/07/2022

Acting for: Yes

Acting for the listed CDFW Representative: Rebecca Garwood
 First and Last Name