COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

3015 H Street, Eureka CA 95501
Phone: (707)445-7541 Fax: (707) 268-3792

Hearing Date: June 2, 2022

To: Humboldt County Planning Commission

From: John H. Ford, Director of Planning and Building Department

Subject: **Emerald Sky Growers, Inc Modification of Zoning Clearance Certificate**
Record Number PLN-2020-16733
Assessor's Parcel Number 220-232-026
Fortuna Area

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Please contact Steven A. Santos, Senior Planner, at 707-268-3749 or by email at sasantos@co.humboldt.ca.us, if you have any questions about the scheduled public hearing item.

AGENDA ITEM TRANSMITTAL

Hearing Date	Subject	Contact
June 2, 2022	Modification to Zoning Clearance Certificate	Steven A. Santos

Project Description: A Conditional Use Permit to modify an approved Zoning Clearance Certificate in the Fortuna Community Planning Area. The modification proposes to increase ancillary nursery space from 600 square feet to 1,500 square feet. The previously approved 2,000 square foot operations building will become a commercial structure to conduct onsite processing and will also be relocated but the size remains the same. The previously approved 5,976 square feet of new mixed light commercial cannabis cultivation remain unmodified as to size and type but the cultivation area will be reconfigured. The water source of a disconnected well, the 119,800-gallon annual water budget, the number of employees, and power source of PGE with a generator for emergencies remain unmodified from what was approved under PLN-11927-ZCC. Water storage will be increased by the modification from 5,000 gallons to 15,000 gallons.

Project Location: This project is in Humboldt County, in the Fortuna area, on the north side of Palmer Boulevard, approximately 2,000 feet west from the intersection of Palmer Boulevard and Shirman Way, on the property known as 636 Palmer Boulevard.

Present Plan Land Use Designations: Residential Low Density (RL), Density: Range is 1 to 8 units per acre, Fortuna Community Plan (FACP), 2017 General Plan, Slope Stability: High Instability (3)

Present Zoning: Agriculture General (AG)

Record Number: PLN-2020-16733

Assessor's Parcel Number: 200-232-026

Applicant	Owner	Agents
Emerald Sky Growers, Inc 636 Palmer Blvd Fortuna, CA 95540	Emerald Sky Growers, Inc 636 Palmer Blvd Fortuna, CA 95540	Margro Advisors

Environmental Review: An Addendum to a previously adopted Final Environmental Impact Report has been prepared for consideration per §15164 of the State CEQA Guidelines.

State Appeal Status: Project is NOT appealable to the California Coastal Commission

Major Issues: Applicant request for greater than 10% on-site propagation

Emerald Sky Growers, Inc
Record Number: PLN-2020-16733
Assessor's Parcel Number: 220-282-008

Recommended Planning Commission Action
1. Describe the application as part of the Consent Agenda.
2. Survey the audience for any person who would like to discuss the application.
3. If no one requests discussion, make the following motion to approve the application as a part of the consent agenda:

Find that the Planning Commission has considered the Addendum to the adopted Environmental Impact Report for the Commercial Cannabis Land Use Ordinance (CCLUO) as described by Section 15164 of the State CEQA Guidelines, make all required findings for approval of the Conditional Use Permit, and adopt the Resolution approving the Emerald Sky Growers, Inc Conditional Use Permit modification as recommended by staff subject to the recommended conditions.

Executive Summary: A Conditional Use Permit to modify an approved Zoning Clearance Certificate in the Fortuna Community Planning Area. The modification proposes to increase ancillary nursery space from 600 square feet to 1,500 square feet. The previously approved 2,000 square foot operations building will become a commercial structure to conduct onsite processing and will also be relocated but the size remains the same. The previously approved 5,976 square feet of new mixed light commercial cannabis cultivation remain unmodified as to size and type but the cultivation area will be reconfigured. The water source of a disconnected well, the 119,800-gallon annual water budget, the number of employees, and power source of PGE with a generator for emergencies remain unmodified from what was approved under PLN-11927-ZCC. Water storage will be increased by the modification from 5,000 gallons to 15,000 gallons.

Ancillary Nursery Space
The applicant has provided an analysis regarding the proposal to increase nursery size from 600 square feet to 1,500 square feet and is included in Attachment 3. The analysis incorporates factors such as maintaining proprietary genetic stock and growing from seed. The proposed increase in nursery size represents a change from 10% to 25.1% of the previously approved cultivation area. The nursery size increase component of the proposed modification is inconsistent with established Planning Commission practice to limit ancillary nursery space to no more than 10%. Therefore, staff is recommending that the request to increase nursery space be denied but approve all other aspects of the modification. The project contains conditions to revise the plot plan and operations plan to conform to this recommendation **(Condition of Approval A1)**. The Commission may also choose to receive testimony from the applicant regarding the nursery size increase request and grant the request in whole or in part.

Onsite Processing
This modification adds the ability to conduct onsite processing in the previously approved 2,000 square foot operations building. The applicant may choose to phase in this use over time. If the applicant does not conduct onsite processing harvested product will be taken to a licensed offsite facility.

Water and Wastewater
No additional water usage is expected from what was approved under the original Zoning Clearance Certificate. The annual water budget of 119,800 gallons is sourced from a disconnected well and remains unchanged. The modification increases water storage from 5,000 to 15,000 gallons. The project uses an irrigation system designed to maximize water conservation. This system is an inground need-based drip irrigation watering system that uses moisture sensors to only water when the soil is dry.

The modification application was referred to the Palmer Creek Community Services District (CSD) and to the Division of Environmental Health. The CSD stated that water and sewer hookups to the project parcel were restricted to residential uses only **(Condition of Approval B2)**. Therefore, the water supply for

the operations building will be the previously approved well. Using the well for the operations building was also previously considered under the approved Zoning Clearance Certificate.

Per the Division of Environmental Health, no processing can occur until a septic system is installed in a suitable location. Cultivation operations may be supported by portable toilets however processing operations cannot occur until a permitted septic system is constructed **(Condition of Approval A3)**. Processing will occur offsite at a licensed facility until the commercial building and wastewater systems is complete.

Natural Resources
No timber clearing or grading will be needed to implement the modified project description. Prior to purchase by the applicant, the project parcel was known to contain illegally stored solid waste and junk vehicles. These have been cleaned up by the applicant. A June 2019 Biological Resources Assessment prepared by TransTerra Consulting was conducted for the parcel and reviewed as part of the processing of the original Zoning Clearance Certificate. The change of use inside the approved operations building and the reconfiguration of the project layout to accommodate site constraints as well as the additional water storage does not represent a significant impact or unanticipated ground disturbance. During the review of the Zoning Clearance Certificate a wet area along the southern property line was identified. As part of the evaluation for this project modification, the applicant provided a February 2021 Wetland and Other Waters Delineation Report prepared by SHN. This report concluded that there were no jurisdictional wetlands present and recommended that the project maintain appropriate buffers for the previously known intermittent stream. Standard conditions of approval require the project to comply with International Dark Sky Association standards.

Energy Source
Electricity source remains unmodified and is provided by PGE and shall be sourced from an eligible renewable energy program, such as the RCEA PowerPlus plan **(Condition of Approval B1)**. A generator is present for emergencies only **(Condition of Approval C6)**.

Noise
The applicant provided a noise assessment. Because this modification is to an approved use, the noise assessment incorporated the uses that were already approved such as the operational greenhouses. The baseline noise levels are 37dB for the southern property line, 47.9 dB for the northern property line, and 44.2 for the western property line. These baselines are incorporated into the noise performance standards in the conditions of approval **(Condition of Approval C1)**.

Access
Access to the site is taken from a 500-foot alley directly from Palmer Boulevard, a paved county-maintained road. The alley averages 14 feet wide and is paved with gravel. Under the previously approved Zoning Clearance Certificate the applicant is required to make improvements at the encroachment of the county road.

The operations will be conducted by the resident permit holder and will not have any employees and will follow the terms and conditions of the approved Zoning Clearance Certificate. Per the Operations Plan, third party vendors may be used to provide staffing during peak operations. Up to three staff is expected during peak operations.

The modification was referred to the Fortuna Fire Protection District and recommendations for dedicated fire fighting water supply, security access, and signage have been incorporated into the conditions of approval **(Condition of Approval A4)**.

Tribal Consultation
The project is in the Bear River Band of Rohnerville Rancheria aboriginal territory. The original Zoning Clearance Certificate was referred to the tribe and no cultural resource evaluation was requested.

Standard inadvertent discovery protocol is included as a condition of approval. **(Condition of Approval C2)**.

Resolution 18-43 Consistency
Approval of this project is consistent with Humboldt County Board of Supervisors Resolution No. 18-43, which established a limit on the number of permits and acres which may be approved in each of the County's Planning Watersheds. The project site is in the Lower Eel Planning Watershed, which under Resolution 18-43 is limited to 336 permits and 116 acres of cultivation. Since this project does not change the size or type of cultivation previously approved, the number of permits and acres in cultivation will not change.

Environmental Review and Staff Recommendation
Environmental review for this project was conducted and based on the results of that analysis, staff concludes that all aspects of the project have been considered in a previously adopted Environmental Impact Report adopted for the Commercial Cannabis Land Use Ordinance. An addendum to the Environmental Impact Report has been prepared for consideration by the Planning Commission (Attachment 2).

Staff recommends that the Planning Commission make all the required findings based on the evidence in the record and approve the application subject to the recommend conditions.

Alternatives
The Planning Commission could elect not to approve the project, or to require the applicant to submit further evidence or modify the project. Modifications may cause potentially significant impacts, additional CEQA analysis and findings may be required. These alternatives could be implemented if the Commission is unable to make all the required findings. Planning staff has concluded that the required findings in support of the proposal have been made. Consequently, staff does not recommend further consideration of any alternative.

The Planning Commission could also decide the project may have environmental impacts that would require further environmental review pursuant to CEQA. Staff did not identify any potential impacts. As the lead agency, the Department has determined that the project is consistent with the EIR for the CCLUO as stated above. However, the Commission may reach a different conclusion. In that case, the Commission should continue the item to a future date at least two months later to give staff the time to complete further environmental review.

RESOLUTION OF THE PLANNING COMMISSION
OF THE COUNTY OF HUMBOLDT
Resolution Number 22-
Record Number PLN-2020-16733
Assessor's Parcel Number: 220-232-026

Resolution by the Planning Commission of the County of Humboldt certifying compliance with the California Environmental Quality Act and conditionally approving the Emerald Sky Growers, Inc, Conditional Use Permit modification.

WHEREAS, **Emerald Sky Growers, Inc,** submitted an application and evidence in support of approving a Conditional Use Permit to modify an approved Zoning Clearance Certificate to increase ancillary nursery space, increase water storage, reconfigure project layout, and add onsite processing to an approved building..

WHEREAS, the County Planning Division, the lead agency, prepared an Addendum to the Final Environmental Impact Report prepared for the Commercial Cannabis Land Use Ordinance (CCLUO) adopted by the Humboldt County Board of Supervisors on May 8, 2018. The proposed project does not present substantial changes that would require major revisions to the Environmental Impact Report. No new information of substantial importance that was not known and could not be known at the time was presented as described by §15162(c) of CEQA Guidelines; and

WHEREAS, the Humboldt County Planning Commission held a duly noticed public hearing on June 2, 2022, and reviewed, considered, and discussed the application for Conditional Use Permits and reviewed and considered all evidence and testimony presented at the hearing.

Now, THEREFORE BE IT RESOLVED, that the Planning Commission makes all the following findings:

1. **FINDING:** **Project Description:** A Conditional Use Permit to modify an approved Zoning Clearance Certificate in the Fortuna Community Planning Area. The modification proposes to increase ancillary nursery space from 600 square feet to 1,500 square feet. The previously approved 2,000 square foot operations building will become a commercial structure to conduct onsite processing and will also be relocated but the size remains the same. The previously approved 5,976 square feet of new mixed light commercial cannabis cultivation remain unmodified as to size and type but the cultivation area will be reconfigured. The water source of a disconnected well, the 119,800-gallon annual water budget, the number of employees, and power source of PGE with a generator for emergencies remain unmodified from what was approved under PLN-11927-ZCC. Water storage will be increased by the modification from 5,000 gallons to 15,000 gallons.

   EVIDENCE: a) Project File: PLN-2020-16733

   CEQA

2. **FINDING:** The requirements of the California Environmental Quality Act have been met. The Humboldt County Planning Commission has considered the Addendum to the Environmental Impact Report (EIR) prepared for the Commercial Cannabis Land Use Ordinance (CCLUO) adopted by the Humboldt County Board of Supervisors on May 8, 2018.

   EVIDENCE: a) Addendum Prepared for the proposed project.

   b) The proposed project does not present substantial changes that would require major revisions to the previous EIR. No new information of substantial importance that was not known and could not be known at the time was presented as described by §15162(c) of CEQA Guidelines

c) As part of the originally approved Zoning Clearance Certificate the applicant provided a June 2019 Biological Resource Assessment. As part of the modification application the applicant provided a February 2021 Wetland and Other Water Delineation Report. Review of these documents indicate that no significant impact will occur from the modified project.

d) The Bear River Tribal Historic Preservation Officer was consulted as part of the original Zoning Clearance Certificate. Standard inadvertent discovery protocol is included as a condition of approval.

e) The project site takes access off Palmer Boulevard and recommendations from Public Works as part of the original Zoning Clearance Certificate will be implemented.

f) The applicant provided a Noise Assessment as part of the Operation Plan. The project is conditioned so noise sources associated with the cannabis operation do not exceed three decibels of continuous noise above existing ambient noise levels at the legal parcel boundary.

FINDINGS FOR CONDITIONAL USE PERMITS

3. FINDING The proposed development is in conformance with the County General Plan, Open Space Plan, and the Open Space Action Program.

EVIDENCE

a) The legal parcel has a designation of Residential Low Density (RL). The modification does not expand or intensify the lot coverage and only changes the uses within a previously approved operations building. Therefore, the modification qualifies as a similar compatible use for the RL land use designation under the General Plan. The proposed project is not located within an Open Space Action Program because the project site is not planned or zoned as open space, does not have a combining zone that would be considered open space, and there are no other open space general plan or zoning code overlays affecting this project.

4. FINDING The proposed development is consistent with the purposes of the existing Agriculture General (AG) zone.

EVIDENCE

a) Ancillary nursery and onsite processing are accessory uses permitted in the AG zone.

b) The location of all project elements meets the setback requirements for the AG Zone.

5. FINDING The proposed development is consistent with the requirements of the CCLUO Provisions of the Zoning Ordinance.

EVIDENCE

a) The CCLUO (HCC 314-55.4.6.1 and 55.4.5.1.4.1) allows cultivation operations including ancillary nursery and onsite processing in Agriculture General (AG) and within a community planning area with a Conditional Use Permit.

b) The parcel was created in compliance with all applicable state and local subdivision regulations because it qualifies for a Certificate of Compliance pursuant to section 66499.35 of the Subdivision Map Act through a Determination of Status (DS-19-912).

c) The project obtains irrigation water from a permitted well, a non-diversionary water source, as previously approved under PLN-11927-ZCC

d) Access is taken directly from Palmer Boulevard, a county-maintained road.

e) The slope of the land is less than 15%

f) The operation will not result in the net conversion of timberland.

g) The location of the operation complies with all setbacks required in Section 314-55.4.7

h) The project will not emit light pollution and the operation is subject to light pollution performance standards.

i) Power will be provided by PGE through an eligible renewable energy program.

6. FINDING The ancillary uses and conditions under which it may be operated or maintained will not be detrimental to the public health, safety, or welfare or materially injurious to properties or improvements in the vicinity.

EVIDENCE

a) The site is located on road that has been evaluated to safely accommodate the amount of traffic generated by the proposed cannabis cultivation.

b) The site is in a rural part of the County where the typical parcel size varies. The proposed project will not be in a location where there is an established neighborhood or other sensitive receptor such as a school, church, park, or other use which may be sensitive to cannabis cultivation. Approving distribution and offsite processing on this site and the other sites which have been approved or are in the application process will not change the character of the area due to the large parcel sized in the area.

c) The location of the proposed cannabis cultivation sites are more than 300 feet from the nearest off-site residence and 600 feet from sensitive receptors.

d) Irrigation water will come from a previously approved groundwater well in accordance with necessary permits and standards.

e) Provisions have been made in the applicant's proposal to protect water quality and thus runoff to adjacent property and infiltration of water to groundwater resources will not be affected.

7. FINDING The proposed development does not reduce the residential density for any parcel below that utilized by the Department of Housing and Community Development in determining compliance with housing element law.

EVIDENCE The parcel was not included in the housing inventory of Humboldt County's 2019 Housing Element and does not currently have an existing residence. The approval of cannabis cultivation on this parcel will not conflict with the ability to construct a residence if one is proposed in the future.

8. FINDING Approval of this project is consistent with Humboldt County Board of Supervisors Resolution No. 18-43 which established a limit on the number of permits and acres which may be approved in each of the County's Planning Watersheds.

EVIDENCE The project site is in the Lower Eel Planning Watershed. Since this project does not change the previously approved cultivation, the number of permits and acres in cultivation will not change.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Humboldt County Planning Commission does hereby:

- Adopt the findings set forth in this resolution; and
- Conditionally approves the Emerald Sky Growers, LLC Conditional Use Permit based upon the Findings and Evidence and subject to the conditions of approval attached hereto as Attachment 1 and incorporated herein by reference; and

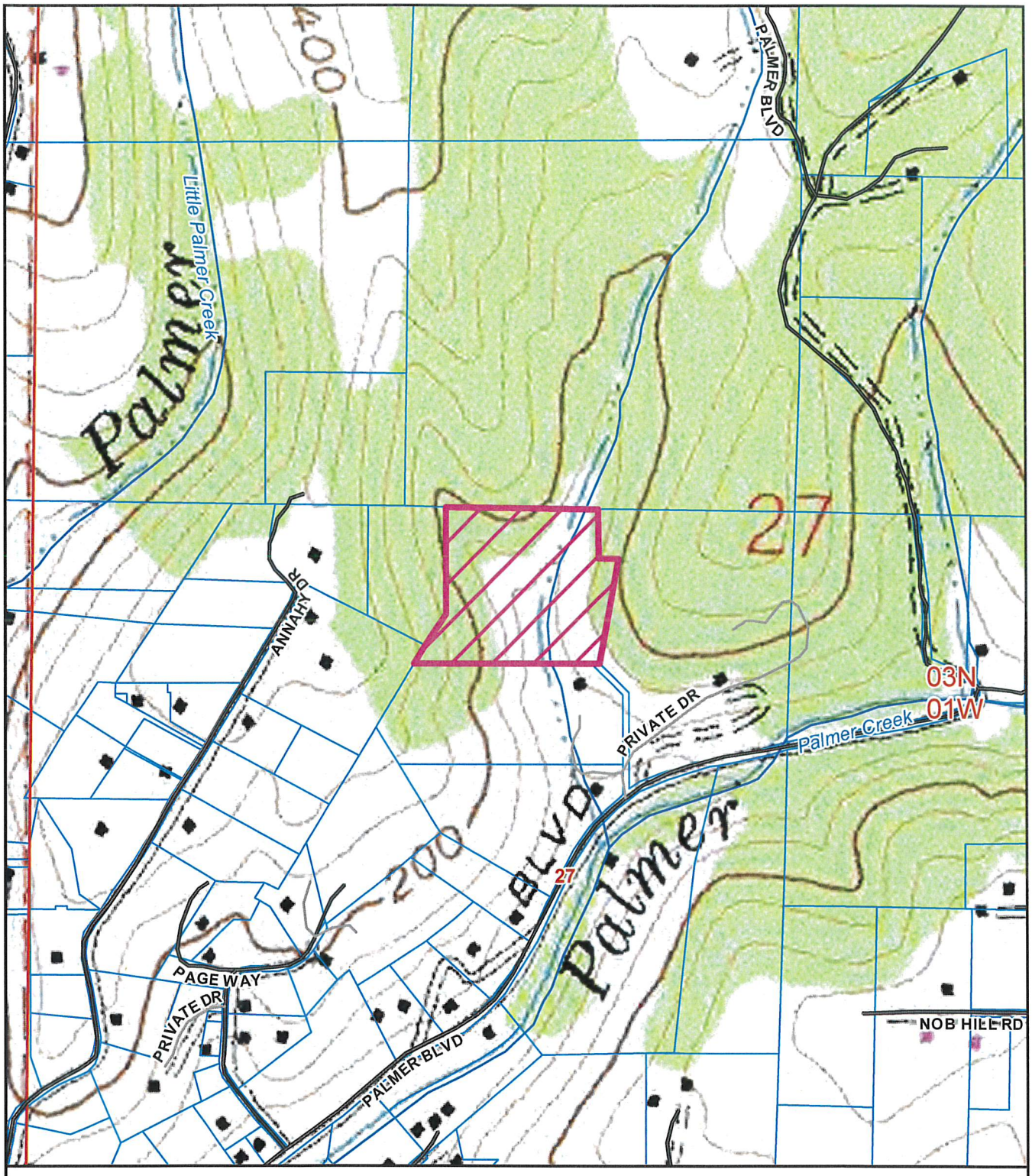
Adopted after review and consideration of all the evidence on **June 2, 2022.**

The motion was made by COMMISSIONER _____and second by COMMISSIONER _____ and the following ROLL CALL vote:

AYES: COMMISSIONERS:
NOES: COMMISSIONERS:
ABSENT: COMMISSIONERS:
ABSTAIN: COMMISSIONERS:
DECISION:

I, John Ford, Secretary to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above-entitled matter by said Commission at a meeting held on the date noted above.

_____
John Ford, Director
Planning and Building Department



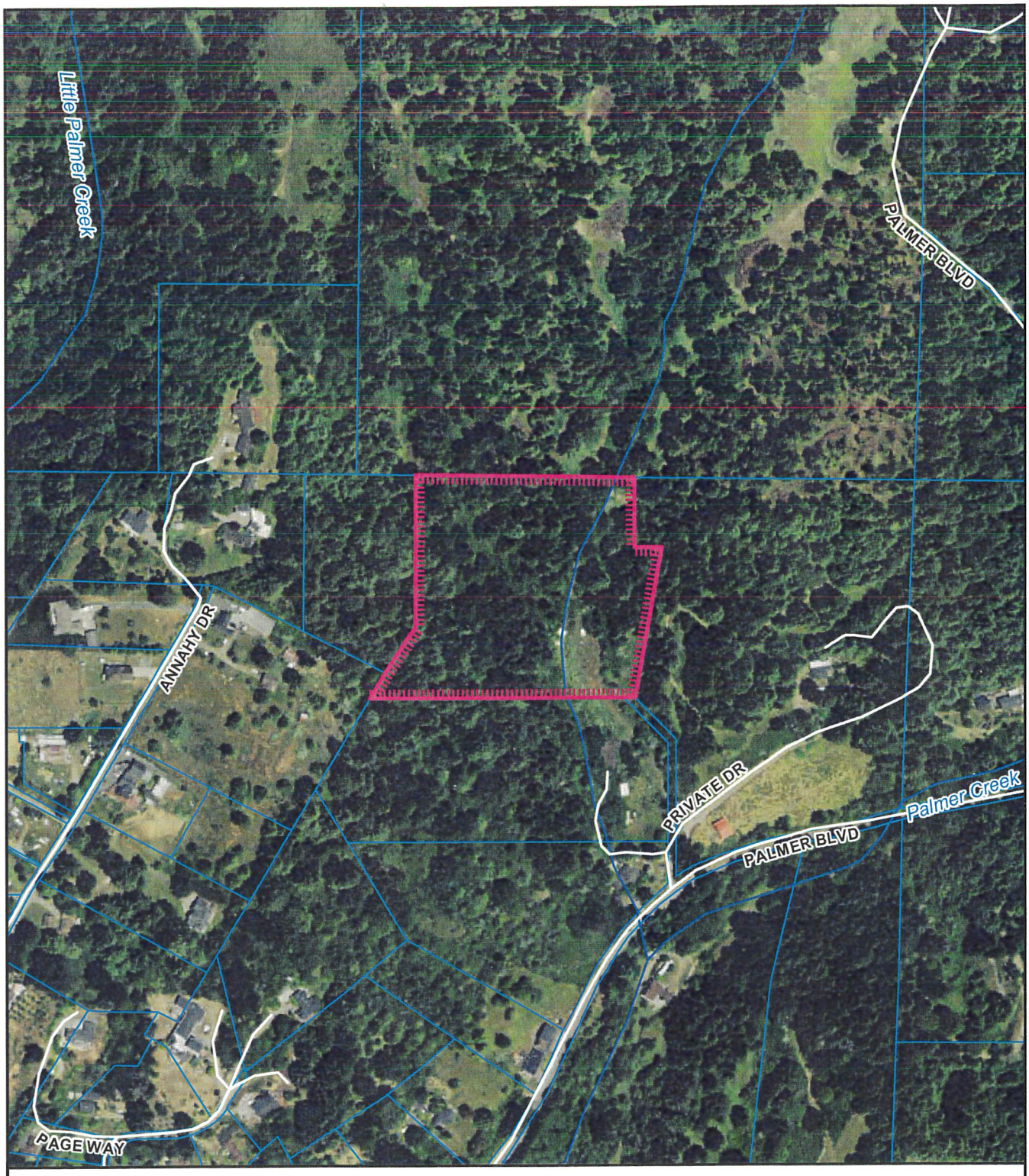
TOPO MAP
PROPOSED EMERALD SKY GROWERS
FORTUNA AREA
PLN-2020-16733
APN: 200-232-026
T03N R01W S27 HB&M (FORTUNA)

Project Area =

N

This map is intended for display purposes and should not be used for precise measurement or navigation. Data has not been completely checked for accuracy.

0 600 1,200 Feet



AERIAL MAP
PROPOSED EMERALD SKY GROWERS
FORTUNA AREA
PLN-2020-16733
APN: 200-232-026
T03N R01W S27 HB&M (FORTUNA)

Project Area =

N

This map is intended for display purposes and should not be used for precise measurement or navigation. Data has not been completely checked for accuracy.

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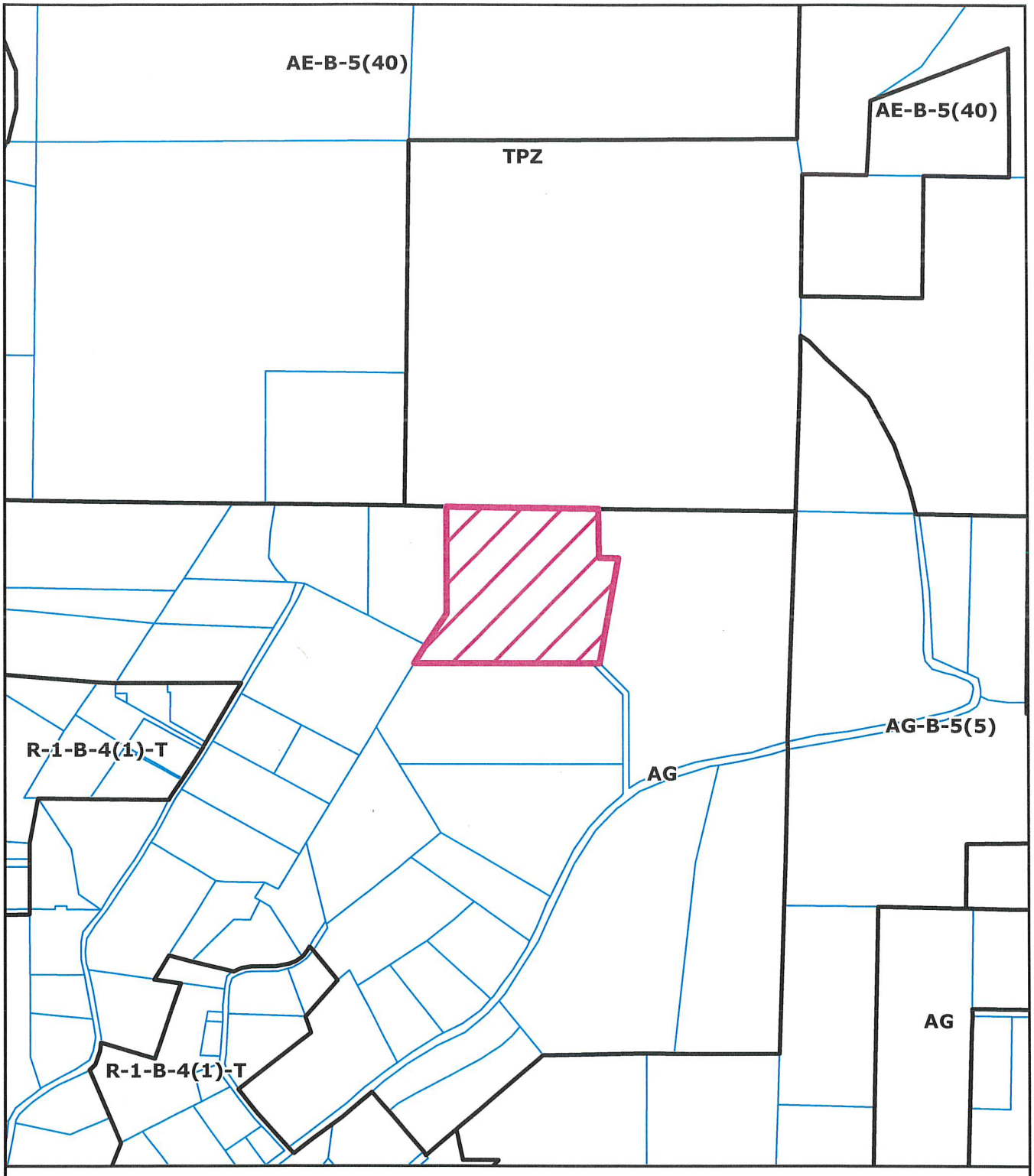


ZONING MAP
PROPOSED EMERALD SKY GROWERS
FORTUNA AREA
PLN-2020-16733
APN: 200-232-026
T03N R01W S27 HB&M (FORTUNA)

Project Area =

N

This map is intended for display purposes and should not be used for precise measurement or navigation. Data has not been completely checked for accuracy.

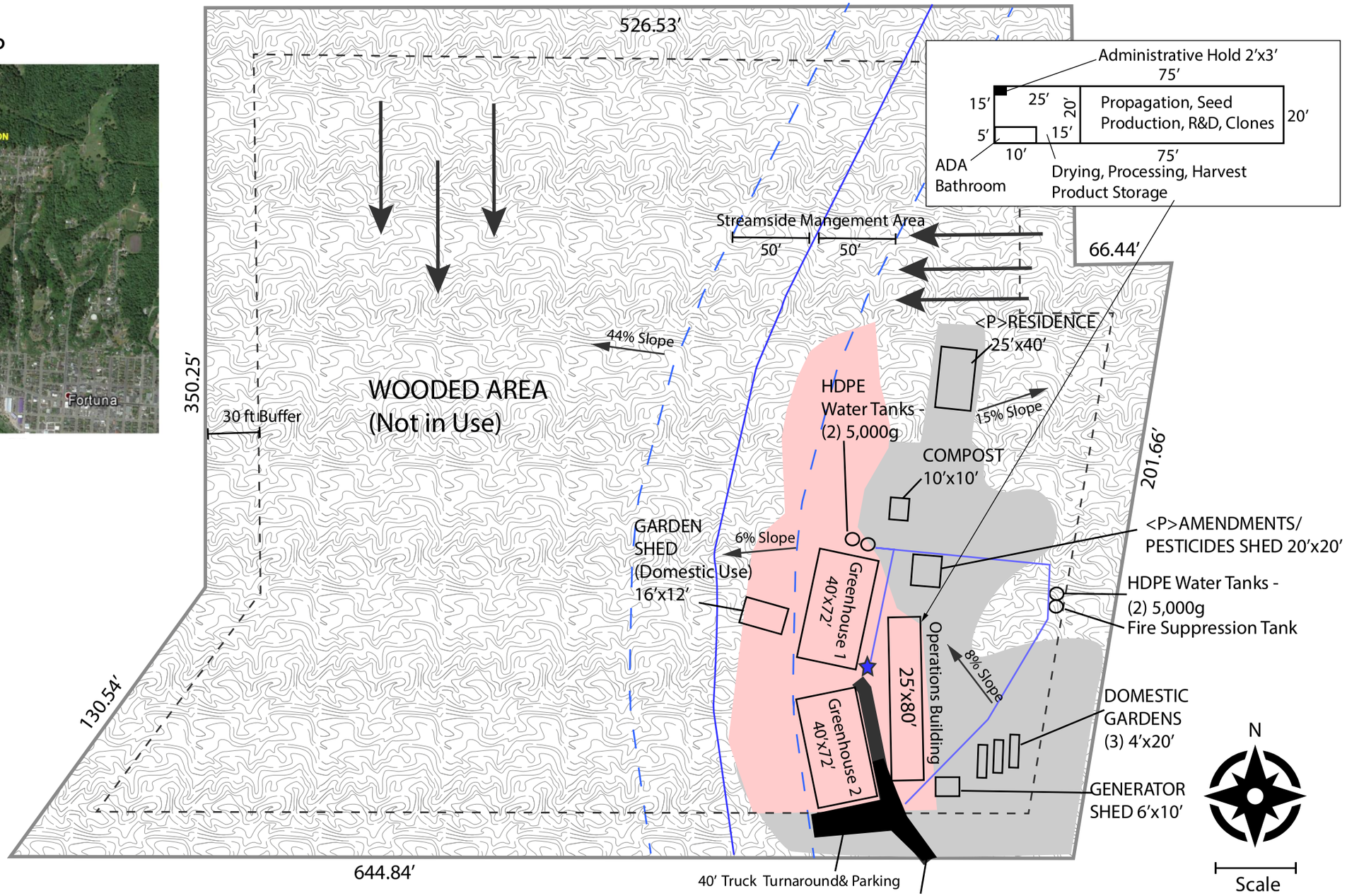
0 600 1,200 Feet

EMERALD SKY GROWERS - APN: 200-232-026

VICINITY MAP

Directions:
Take exit 690 toward Palmer Blvd
Turn right onto Palmer Blvd

636 Palmer Blvd
Fortuna, CA 95540



LEGEND

- Prime Ag Soil
- Cleared Areas
- Pre-existing Access Road
- Permitted Well
- Irrigation Lines
- Surface Runoff

NOTES: Processing will be done offsite until the planned facility is constructed and permitted for use
Domestic gardens may include personal cannabis plants
Streamside setbacks are 50' from the ripirian dripline of the intermittent stream

ATTACHMENT 1

RECOMMENDED CONDITIONS OF APPROVAL

APPROVAL OF THE CONDITIONAL USE PERMITS ARE CONDITIONED ON THE FOLLOWING TERMS AND REQUIREMENTS:

A. Conditions which must be satisfied before the cannabis operations may be initiated (unless otherwise indicated).

1. Within 30 days of the Planning Commission Decision, the applicant must update the plot plan and operations plan to reflect an ancillary nursery of 600 square feet.

2. The applicant must complete any terms or conditions that are necessary before commencing operations as described in PLN-11927-ZCC.

3. Prior to initiating onsite processing in the form of trimming or packaging, the permittee will bring the operations building to commercial occupancy standards which includes appropriate wastewater facilities. This includes an onsite septic system or other wastewater system since the community services district connection is limited to residential uses. The applicant may use the operations building for other cannabis related uses other the onsite processing.

4. Prior to initiating operations, the permittee will provide documentation from the Fortuna Fire Protection District (FPD) demonstrating:
    a. Road width, road capacity, turnaround dimensions, turn out provisions, gate access, and address identification meet the standards and needs of the FPD as identified in the referral response.
    b. Minimum 5,000 gallons water, hydrant within 1,000 feet, 3-inch standpipe, 2.5-inch national hose with cap, and access to standpipe for fire apparatus as identified in the FPD referral response.

5. If completion of any condition of approval in Attachment 1 result in changes to the plot plan or operations plan, the permittee will provide a plot plan update to the department within 30 days or according to a schedule mutually agreed upon by the permittee and the Planning and Building Department.

B. General Conditions

1. Upon request, the applicant shall provide documentation verifying that energy obtained from PGE is sourced from an eligible renewable program.

2. Water and wastewater services obtained from the Palmer Creek Community Services District (CSD) is restricted to residential use only. There shall be no interconnectivity between the CSD systems and the cannabis operation.

3. Applicant is responsible for obtaining all necessary County and State permits and licenses and for meeting all requirements set forth by other regulatory agencies.

4. The applicant is responsible for costs for post-approval review for determining project conformance with conditions. A deposit is collected to cover this staff review. Permit conformance with conditions must be demonstrated prior to release of building permit or initiation of use and at time of annual inspection. A conformance review deposit as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors shall be paid within sixty (60) days of the effective date of the permit or upon filing of the Compliance Agreement (where

applicable), whichever occurs first. Payment shall be made to the Humboldt County Planning Division, 3015 "H" Street, Eureka.

5. A Notice of Determination will be prepared and filed with the County Clerk for this project in accordance with the State CEQA Guidelines. Within three days of the effective date of permit approval, the Department will file the Notice of Determination and will charge this cost to the project.

6. The applicant shall install monitoring device(s) on each water source. Applicant shall maintain water usage logs from each source for the life of the project and make logs available for inspection upon request.

7. The applicant shall be compliant with the County of Humboldt's Certified Unified Program Agency (CUPA) requirements regarding hazardous materials. Ongoing proof of compliance with this condition shall be required at each annual inspection to keep the permit valid.

C. Ongoing Requirements/Development Restrictions Which Must be Satisfied for the Life of the Project:

1. The combination of background or other operational equipment created noise must not exceed more than three decibels above ambient noise as measured in the February 2022 noise assessment. Specifically, noise may not exceed 40 dB for the southern property line, 50.9 dB for the northern property line, and 47.2 for the western property line.

2. If cultural resources are encountered during construction activities, the contractor on site shall cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist and the appropriate Tribal Historic Preservation Officer(s) are to be contacted to evaluate the discovery and, in consultation with the applicant and the lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided.

   Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. If human remains are found, California Health and Safety Code 7050.5 requires that the County Coroner be contacted immediately at 707-445-7242. If the Coroner determines the remains to be Native American, the Native American Heritage Commission will then be contacted by the Coroner to determine appropriate treatment of the remains pursuant to Public Resources Code (PRC) Section 5097.98. Violators shall be prosecuted in accordance with PRC Section 5097.99.

3. The applicant shall adhere to the Invasive Species Plan for the life of the project. The invasive species control plan can be found in the Operations Plan.

4. All artificial lighting shall be fully contained within structures such that no light escapes (i.e., through the use of blackout curtains). Structures shall be enclosed between 30 minutes prior to sunset and 30 minutes after sunrise to prevent disruption to crepuscular wildlife. Security lighting shall comply with the International Dark-Sky Association standards and Fixture Seal of Approval Program (refer to https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/). Standards include but are not limited to: Light shall 1) be shielded and downward facing, 2) consist of Low Pressure Sodium (LPS) light or low spectrum Light Emitting Diodes (LED) with a color temperature of 3000 kelvins or less, and 3) only placed where needed.

5. Should the Humboldt County Planning Division receive complaints that the lighting or noise is not complying with the standards listed above within ten (10) working days of receiving written notification that a complaint has been filed, the applicant shall submit written verification that the lights' shielding and alignment, and noise levels have been repaired, inspected, and corrected as necessary.

6. Generator use will be limited to emergencies only.

7. The use of monofilament netting for all uses, including but not limited for erosion control, shall be prohibited. Geotextiles, fiber rolls, and other erosion control measure materials shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves to minimize the risk of ensnaring and strangling wildlife.

8. All refuse shall be contained in wildlife proof storage containers, at all times, and disposed of at an authorized waste management facility.

9. Should any wildlife be encountered during work activities, the wildlife shall not be disturbed and be allowed to leave the work site unharmed.

10. The use of anticoagulant rodenticide is prohibited. Per the recommendation in the biological assessment, only manual traps may be used.

11. The operator shall provide information to all employees about the potential health impacts of cannabis use on children. Information shall be provided by posting the brochures from the Department of Health and Human Services titled "Cannabis Palm Card" and "Cannabis Rack Card." This information shall also be provided to all employees as part of the employee orientation.

12. All components of project shall be developed, operated, and maintained in conformance with the Project Description, the approved Site Plan, the Plan of Operations, and these conditions of approval. Changes shall require modification of this permit except where consistent with Humboldt County Code Section 312-11.1, Minor Deviations to Approved Plot Plan. If offsite processing is chosen to be the preferred method of processing, this permit shall be modified to identify the offsite licensed facility.

13. Cannabis cultivation and other commercial cannabis activity shall be conducted in compliance with all laws and regulations as set forth in the CCLUO as applicable to the permit type.

14. If operating pursuant to a written approved compliance agreement, permittee shall abate or cure violations at the earliest feasible date, but in no event no more than two (2) years from the date of issuance of a provisional clearance or permit. Permittee shall provide plans for curing such violations to the Planning and Building Department within one (1) year of issuance of the provisional clearance or permit. If good faith effort toward compliance can be shown within the two years following the issuance of the provisional clearance or permit, the Department may, at the discretion of the Director, provide for extensions of the provisional permit to allow additional time to meet the outstanding requirements.

15. Compliance with all statutes, regulations, and requirements of the California State Water Resources Control Board and the Division of Water Rights, at a minimum to include a statement of diversion of surface water from a stream, river, underground stream, or other watercourse required by Water Code Section 5101, or other applicable permit, license, or registration, as applicable.

16. Confinement of the area of cannabis cultivation, processing, manufacture, or distribution to the locations depicted on the approved site plan. The commercial cannabis activity shall be set back at least 30 feet from any property line, and 600 feet from any school, school bus stop, church or other place of religious worship, or tribal cultural resources, except where a reduction to this setback has been approved pursuant to Section 55.4.11(d).

17. Maintain enrollment in Tier 1 or 2 certification with State Water Resources Control Board Order WQ 2019-0001-DWQ, if applicable, or any substantially equivalent rule that may be subsequently adopted by the County of Humboldt or other responsible agency.

18. Comply with the terms of any applicable Lake and Stream Alteration (1600 or 1602) Permit obtained from the California Department of Fish and Wildlife (CDFW).

19. Comply with the terms of a less-than-3-acre conversion exemption or timberland conversion permit, approved by the California Department of Forestry and Fire Protection (Cal Fire), if applicable.

20. Consent to an annual on-site compliance inspection, with at least 24 hours prior notice, to be conducted by appropriate County officials during regular business hours (Monday through Friday, 9:00 a.m. to 5:00 p.m., excluding holidays).

21. Refrain from the improper storage or use of any fuels, fertilizer, pesticide, fungicide, rodenticide, or herbicide.

22. Pay all applicable application, review for conformance with conditions and annual inspection fees.

23. The master logbooks maintained by the applicant to track production and sales shall be maintained for inspection by the County.

24. Pay all applicable taxes as required by the Humboldt County Commercial Marijuana Cultivation Tax Ordinance (Humboldt County Code Section 719-1 et seq.).

Performance Standards for Cultivation and Processing Operations

25. Pursuant to Business and Professions Code section 26051.5(a)(8), an applicant seeking a cultivation license shall "provide a statement declaring the applicant 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), to the extent not prohibited by law."

26. Operators shall comply with all applicable federal, state, and local laws and regulations governing California Agricultural Employers, which may include federal and state wage and hour laws, Cal/OSHA, OSHA, the California Agricultural Labor Relations Act, and the Humboldt County Code (including the Building Code).

27. While engaged in processing, operators shall comply with the following Processing Practices:
    a. Processing operations must be maintained in a clean and sanitary condition including all work surfaces and equipment.
    b. Processing operations must implement protocols which prevent processing contamination and mold and mildew growth on cannabis.
    c. Employees handling cannabis in processing operations must have access to facemasks and gloves in good operable condition as applicable to their job function.
    d. Employees must wash hands sufficiently when handling cannabis or use gloves.

28. All persons hiring employees to engage in commercial cannabis cultivation and processing shall comply with the following Employee Safety Practices:
    a. Cultivation operations and processing operations must implement safety protocols and provide all employees with adequate safety training relevant to their specific job functions, which may include:
        (1) Emergency action response planning as necessary;
        (2) Employee accident reporting and investigation policies;
        (3) Fire prevention;
        (4) Hazard communication policies, including maintenance of material safety data sheets (MSDS);
        (5) Materials handling policies;
        (6) Job hazard analyses; and
        (7) Personal protective equipment policies, including respiratory protection.

b. Cultivation operations and processing operations must visibly post and maintain an emergency contact list which includes at a minimum:
   (1) Operation manager contacts;
   (2) Emergency responder contacts; and
   (3) Poison control contacts.
c. At all times, employees shall have access to safe drinking water and toilets and handwashing facilities that comply with applicable federal, state, and local laws and regulations. Plumbing facilities and water source must be capable of handling increased usage without adverse consequences to neighboring properties or the environment.
d. On site-housing provided to employees shall comply with all applicable federal, state, and local laws and regulations.

29. All operators shall comply with the approved processing plan as to the following:
   a. Processing practices
   b. Location where processing will occur
   c. Number of employees, if any
   d. Employee Safety Practices
   e. Toilet and handwashing facilities
   f. Plumbing and/or septic system and whether or not the system is capable of handling increased usage
   g. Drinking water for employees
   h. Plan to minimize impact from increased road use resulting from processing
   i. On-site housing, if any

30. Term of Commercial Cannabis Activity Permit. Any Commercial Cannabis Cultivation permit issued pursuant to the CMMLUO or CCLUO shall expire one (1) year after date of issuance, and on the anniversary date of such issuance each year thereafter, unless an annual compliance inspection has been conducted and the permittees and the permitted site have been found to comply with all conditions of approval.

31. Inspections. If the inspector or other County official determines that the permittees or site do not comply with the conditions of approval, the inspector shall serve the permit holder with a written statement identifying the items not in compliance, and the action that the permit holder may take to cure the noncompliance or file an appeal within ten (10) days of the date that the written statement is delivered to the permit holder. Personal delivery or mailing the written statement to the mailing address listed on the application by regular mail, plus three (3) days after date of mailing, shall constitute delivery. The permit holder may request a reinspection to determine whether or not the permit holder has cured all issues of noncompliance. Failure to request reinspection or to cure any items of noncompliance shall terminate the Permit, immediately upon the expiration of any appeal period, or final determination of the appeal if an appeal has been timely filed.

32. Permit Renewals to Comply with Updated Laws and Regulations. Permit renewal is subject to the laws and regulations effective at the time of renewal, which may be substantially different than the regulations currently in place and may require the submittal of additional information to ensure that new standards are met.

33. Acknowledgements to Remain in Full Force and Effect. Permittee acknowledges that the County reserves the right to reduce the size of the area allowed for cultivation under any clearance or permit issued in accordance with this section in the event that environmental conditions, such as a sustained drought or low flows in the watershed in which the cultivation area is located, will not support diversions for irrigation.

34. Transfers. Transfer of any leases or permits approved by this project is subject to the review and approval of the Planning Director for conformance with CMMLUO eligibility requirements and

agreement to permit terms and acknowledgments. The fee for required permit transfer review shall accompany the request. The request shall include the following information:

a. Identifying information for the new owner(s) and management as required in an initial permit application;
b. A written acknowledgment by the new owner in accordance as required for the initial permit application;
c. The specific date on which the transfer is to occur;
d. Acknowledgement of full responsibility for complying with the existing permit; and
e. Execution of an Affidavit of Non-diversion of Medical Cannabis.

35. Inspections. The permit holder and subject property owner are to permit the County or representative(s) or designee(s) to make inspections at any reasonable time deemed necessary to assure that the activities being performed under the authority of this permit are in accordance with the terms and conditions prescribed herein.

ATTACHMENT 2

CEQA ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE COMMERCIAL CANNABIS LAND USE ORDINANCE

Commercial Cannabis Land Use Ordinance Final Environmental Impact Report (EIR)
(State Clearinghouse # 2017042022), January 2018

APNs 201-322-011; Fortuna area, County of Humboldt

Prepared By
Humboldt County Planning and Building Department
3015 H Street, Eureka, CA 95501

May 2022

Background

Modified Project Description and Project History – The Commercial Cannabis Land Use Ordinance (CCLUO) updated the County's existing Commercial Medical Marijuana Land Use Ordinance (Section 313-55.4 and 314-55.4 of Chapter 3 of Division 1 of Title III of the County Code) as well as repeal of the Medical Cannabis Testing and Research Laboratories provisions and on-site consumption prohibition found in Sections 313-55.3.15, 314-55.3.15, 313-55.3.11.7, and 314-55.3.11.7 of Division 1 of Title III of the County Code, respectively. These regulations establish land use regulations for the commercial cultivation, processing, manufacturing, distribution, testing, and sale of cannabis within Humboldt County. These regulations were developed in concert with the Final Environmental Impact Report (EIR) that was adopted for the ordinance in order to implement the mitigation measures of the EIR. The EIR addressed the broad environmental impacts that could be expected to occur from the adoption and implementation of the ordinance. The EIR specified that the regulations established in the CCLUO would mitigate the impacts of existing and new cannabis operations by establishing regulations for an unregulated land use to help prevent and reduce environmental impacts that are known to result from cultivation operations. The EIR prepared for the CCLUO also established local land use regulations to allow for commercial cannabis operations in the unincorporated area of the County that ensure the health and safety of residents, employees, County visitors, neighboring property owners and end users of cannabis. The proposed project is consistent with all regulations within the CCLUO and all mitigation measures of the EIR. The current project was contemplated by the EIR and compliance with the provisions of the CCLUO will fully mitigate all environmental impacts of the project to a less than significant level.

A Conditional Use Permit to modify an approved Zoning Clearance Certificate in the Fortuna Community Planning Area. The modification proposes to increase ancillary nursery space from 600 square feet to 1,500 square feet. The previously approved 2,000 square foot operations building will become a commercial structure to conduct onsite processing and will also be relocated but the size remains the same. The previously approved 5,976 square feet of new mixed light commercial cannabis cultivation remain unmodified as to size and type but the cultivation area will be reconfigured. The water source of a disconnected well, the 119,800-gallon annual water budget, the number of employees, and power source of PGE with a generator for emergencies remain unmodified from what was approved under PLN-11927-ZCC. Water storage will be increased by the modification from 5,000 gallons to 15,000 gallons.

The applicant provided a Wetland and Other Water Delineation Report dated February 2021 prepared by SHN which determined that no wetlands were present. Consultation with the Bear River Tribal Historic Preservation Officer recommended inadvertent discovery protocol. This modification does not change the intensity or lot coverage of previously approved the previously approved project PLN-11927-ZCC. As part of the Operations Plan, the applicant conducted a noise assessment which as been incorporated into the conditions of approval for the project.

Purpose - Section 15164 of the California Environmental Quality Act (CEQA) provides that the lead agency shall prepare an addendum to a previously certified Final Environmental Impact Report (EIR) if some changes or additions are necessary but none of the conditions described in Section 15162 calling for a subsequent EIR or Negative Declaration have occurred. Section 15162 states that when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3.□ New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Final EIR was certified as complete, shows any of the following: A) the project will have one or more significant effects not discussed in the previous Final EIR; B) significant effects previously examined will be substantially more severe than shown in the Final EIR; C) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or D) mitigation measures or alternatives which are considerably different from those analyzed in the Final EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Summary of Significant Project Effects and Mitigation Recommended

No changes are proposed for the Final EIR recommended mitigations. The proposal to authorize the proposed project is fully consistent with the impacts identified and adequately mitigated in the Final EIR. The project as conditioned to implement responsible agency recommendations, results in no significantly adverse environmental effects beyond those identified in the Final EIR.

In reviewing the application for consistency with the adopted EIR the County considered the following information and studies, among other documents:

- Operations Plan and Plot Plan for Emerald Sky Growers, LLC
- A Noise Assessment
- County GIS
- Wetland and Other Waters Delineation Report dated February 2021 by SHN.

Other CEQA Considerations

Staff suggests no changes for the revised project.

EXPLANATION OF DECISION NOT TO PREPARE A SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION OR ENVIRONMENTAL IMPACT REPORT

See **Purpose** statement above.

In every impact category analyzed in this review, the projected consequences of the current project proposal are either the same or less than significantly increased than the initial project for which the EIR was adopted. Based upon this review, the following findings are supported:

FINDINGS

1. The proposed project will permit a new cannabis operation and bring the operation into compliance with county and state requirements intended to adequately mitigate environmental impacts.

2. The circumstances under which the project was approved have not changed substantially. There are no new significant environmental effects and no substantial increases in the severity of previously identified effects.

3. For the current proposed project, there has been no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted as complete.

CONCLUSION

Based on these findings it is concluded that an Addendum to the previous Final EIR is appropriate to address the requirements under CEQA for the current project proposal. All of the findings, mitigation requirements, and mitigation and monitoring program of the EIR, remain in full force and effect on the original project.

There are no new significant environmental effects and no substantial increases in the severity of previously identified effects. For the current proposed project, there has been no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted as complete.

ATTACHMENT 3

Applicant's Evidence in Support of the Required Findings

Attachment 3 includes a listing of all written evidence which has been submitted by the applicant in support of making the required findings. The following materials are on file with the Planning Division:

1. The name, contact address, and phone number(s) of the applicant. (On File – Application Form)

2. If the applicant is not the record title owner of parcel, written consent of the owner for the application with original signature and notary acknowledgement. (On File)

3. Plot plan showing the entire parcel, including easements, streams, springs, ponds and other surface water features, and the location and area for cultivation on the parcel with dimensions of the area for cultivation and setbacks from property lines. The site plan shall also include all areas of ground disturbance or surface water disturbance associated with cultivation activities, including access roads, water diversions, culverts, ponds, dams, graded flats, and other related features. If the area for cultivation is within one-quarter mile (1,320 feet) of a school, school bus stop, church or other place of religious worship, public park, or tribal cultural resource, the plot plan shall include dimensions showing that the distance from the location of such features to the nearest point of the cultivation area is at least 600 feet. (**Attached** with project Maps)

4. A cultivation and operations plan that meets or exceeds minimum legal standards for water storage, conservation and use; drainage, runoff and erosion control; watershed and habitat protection; proper storage of fertilizers, pesticides, and other regulated products to be used on the parcel; and a description of cultivation activities (outdoor, indoor, mixed light), the approximate date(s) cannabis cultivation activities have been conducted on the parcel prior to the effective date of this ordinance, if applicable, and schedule of activities during each month of the growing and harvesting season. (**Attached**)

5. Copy of the statement of water diversion, or other permit, license or registration filed with the State Water Resources Control Board, Division of Water Rights, if applicable. (Not Applicable)

6. Description of water source, storage, irrigation plan, and projected water usage. (**Attached** in Cultivation Operations Plan)

7. Copy of Notice of Applicability and Site Management Plan and other documents filed with the State Water Resources Control Board demonstrating enrollment in Tier 1 or 2 in accordance with State Water Resources Control Board Order WQ 2019-0001-DWQ, or any substantially equivalent rule that may be subsequently adopted by the County of Humboldt or other responsible agency. (On File as part of PLN-11927-ZCC)

8. If any on-site or off-site component of the cultivation facility, including access roads, water supply, grading or terracing, impacts the bed or bank of any stream or other watercourse, a copy of the Streambed Alteration Permit obtained from the California Department of Fish and Wildlife. (Not Applicable)

9. If the source of water is a well, a copy of the County well permit, if available. (**Attached**)

10. If the parcel is zoned FR, U or TPZ, or involves the conversion of timberland as defined under Section 4526 of the Public Resources Code, a copy of a less-than-3-acre conversion exemption or timberland conversion permit, approved by the California Department of Forestry and Fire Protection (Cal Fire). Alternately, for existing operations occupying sites created through prior unauthorized conversion of timberland, evidence may be provided showing that the landowner

has completed a civil or criminal process and/or entered into a negotiated settlement with Cal Fire. (Not Applicable)

11. Consent for on-site inspection of the parcel by County officials at prearranged date and time in consultation with the applicant prior to issuance of any clearance or permit, and once annually thereafter. (On File)

12. Acknowledge that the County reserves the right to reduce the size of the area allowed for cultivation under any clearance or permit issued in accordance with this Section in the event that environmental conditions, such as a sustained drought or low flows in the watershed, will not support diversions for irrigation. (On File)

13. Acknowledge that the County reserves the right to engage with local tribes before consenting to the issuance of any clearance or permit, if cultivation operations occur within an Area of Traditional Tribal Cultural Affiliation, as defined herein. This process will follow current departmental referral protocol, including engagement with the tribe(s) through coordination with their Tribal Historic Preservation Officer (THPO) or other tribal representatives. This procedure shall be conducted similar to the protocols outlined under SB 18 (Burton) and AB 52 (Gatto), which describe "government to government" consultation, through tribal and local government officials and their designees. During this process, the tribe may request that operations associated with the clearance or permit be designed to avoid, minimize, or mitigate impacts to tribal cultural resources, as defined herein. Examples include, but are not limited to, conducting a site visit with the THPO or their designee to the existing or proposed cultivation site, requiring that a professional cultural resources survey be performed, or requiring that a tribal cultural monitor be retained during project-related ground disturbance within areas of sensitivity or concern. The County shall request that a records search be performed through the California Historical Resources Information System (CHRIS). (On File)

14. A Wetland and Other Water Delineation Report dated February 2021 by SHN. (**Attached**)

15. A Biological Resource Assessment report dated June 2019 by TransTerra Consulting. (**Attached**)

16. A Noise Study prepared by applicant. (**Attached in Cultivation Operations Plan)**

17. A Road Evaluation by Whitchurch Engineering. (**Attached**)

18. A Nursery Size Analysis prepared by applicant. (**Attached**)

Cultivation Plan
Parcel # 200-232-026 / APP# 16733

The following plan describes the general operations for managing a 5,976 sq ft mixed-light cultivation site.

1. Water Use

The amount of water used for the cultivation of cannabis will vary throughout the year, with a maximum expected usage of up to 530 gallons per day in summer months. Details of the grower's cultivation and water usage is outlined below.

Water used for cannabis cultivation is sourced from rain catchment and an onsite well. The site will have the capacity to store 15,000 gallons of water for irrigation using three 5,000 gallon rain catchment tanks. Gravity directs waterflow from the tanks through the irrigation lines. An electric pump directs water from the well to storage tanks when needed.

The approved Nexus greenhouse also provides rain catchment as it collects rainwater from around the building and coming off the glass roof panels. All irrigation is dispersed with a cutting edge technology, Blumat irrigation system, designed to maximize water conservation. The Blumat system is an inground need-based drip irrigation watering system that uses moisture sensors to only water when the soil is dry. Plants only get the amount of water they actually need.

During the beginning of the grow season, clones are watered two to three times a week as needed. Once fully planted in greenhouses, irrigation increases up to every day. Carefully managed irrigation, with immediate oversight reduces the possibility of irrigation runoff.

Due to the planned implementation of the Blumat system, and additional conservation measures, expected water usage for cultivation remains the same. The following provides an estimate of monthly irrigation use in gallons:

1.a. The table below is an estimation of water usage throughout the year:

Cultivation and Water Usage					
ESG APN: 200-232-026					
	Cultivation Stage			Cultivation Space	Water Usage
Month	Veg	Flower	Harvest	Square Footage	Gal/month
January	X	X		1,500 ft^2 Veg & 5,600 ft^2 Flower	6,700
February	X	X	X	1,500 ft^2 Veg & 5,600 ft^2 Flower	6,700
March	X	X	X	1,500 ft^2 Veg & 5,600 ft^2 Flower	7,500

April	X	X	X	1,500 ft^2 Veg & 5,600 ft^2 Flower	7,600
May	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	7,800
June	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	10,000
July	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	11,500
August	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	16,000
September	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	15,000
October	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	13,500
November	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	10,000
December	X	X	X	1,500 ft^2 Veg & 5,976 ft^2 Flower	7,500

2. Watershed Protection

To protect nearby watershed areas and nearby habitat the site is managed to meet standard conditions and follow best practices in accordance with guidelines provided by the North Coast Regional Water Quality Control Board (NCRWQCB). These practices address erosion control and drainage features, spoils management, water storage and use, irrigation runoff, fertilizers and pesticides, and stream and wetland buffers when applicable.

The most active steps for the site include:

- Regenerative soil
- Ongoing mulch covering for water retention
- Low heat lighting to reduce evaporation
- Usage of vegetative ground cover for added sediment control
- Blumat in-ground drip irrigation system, which prevents surface runoff

The parcel has an onsite seasonal stream, which is an unnamed tributary of Palmer Creek. The cannabis cultivation does not impose on any setbacks as required in the State Water Resource Control Board (SWRCB) General Order specifications.

The grower, designated as the “Discharger”, is enrolled in the SWRCB Waiver of Waste Discharge program as a Tier I Low Risk Discharger. The cultivation site includes a Site Management Plan (SMP) for the property. A copy of the SMP is kept onsite for ongoing site management and regulatory inspections.

3. Energy Plan

The site uses grid electricity from PG&E, with a generator for backup power. The generator will be housed in a 6’x10’ shed to ensure meeting perimeter noise restrictions required by environmental regulations.

The site will be enrolled in the PG&E REPower program which supplies up to 100% renewable energy to PG&E customers.

4. Onsite Structures

The site will include two 2,880 (40'x72') square foot greenhouses and a 2,000 (20'x100') square foot operations building with an ADA restroom to support onsite drying and processing. The operations building will also be used to house a 1,500 square foot nursery, along with secure storage for harvested product, and records storage.

Existing Structures		
Garden Shed	16'x12' (192 sq ft)	Tool Shed (Domestic Use)
Proposed Structures		
Residence	25'x40' (1000 sq ft)	Owner Housing (Domestic)
Greenhouse 1	40'x72' (2,880 sq ft)	Cultivation Area
Greenhouse 2	40'x72' (2,880 sq ft)	Cultivation Area
Generator Shed	6'x10' (60 sq ft)	Generator, Fuel Storage
Amendments Shed	20'x20' (400 sq ft)	Amendments & Pesticides Storage
Operations Building	20'x100' (2,000 sq ft)	Nursery, Drying, Processing, Packaging, Harvested Product, Records Storage

5. Materials Storage

The site will use primarily natural fertilizers which will be determined and decided based on soil testing prior to the planting season. The current plan is to only use California Organic Input Material (OIM) approved products in the cultivation process.

All plant nutrients and supplements will be stored indoors, inside storage cabinets. Materials will be kept in their original containers with product labels in place and legible. Appropriate Safety Data Sheets (SDS) will be kept onsite as a component of the cultivator's SMP. Because organic cultivation methods will be used, there will be very few manmade or harmful chemicals kept on the property.

Up to 10 gallons of fuel will be stored within the generator shed with secondary containment, along with a Spill Prevention, Countermeasures, and Cleanup (SPCC) kit. As a safety measure, kits provide a supply of clean-up materials in the event of accidents, and are kept within fuel storage areas.

6. Waste Management

Plant waste is collected and then covered for recycling and reuse. Unusable plant waste is composted. Other solid waste will be stored in 32 gallon containers with covers, and will be transported to an approved waste management facility, on a weekly basis. Materials intended for reuse will be stored in a clean and safe manner to be managed and reused as needed.

The site is connected to community water and sewer for residential use by the owner. Any third party staff will be provided temporary toilet and handwashing facilities, until the planned bathroom and new septic system are installed. The new septic system will be built to exceed the expected daily use of up to three people during harvest season.

A water cooler will provide drinking water for any staff and visitors.

7. Cultivation Activities

This mixed-light cultivation has 4-5 planned harvests per year with staggered starts in isolated areas within the greenhouses beginning in January of each year. Each strain will require a specific number of days in the vegetation and flowering stages. These durations will be determined by strain, grower experience, or requirements from buyers.

- Clones/seedlings will be started from seeds/mother plants in a designated area of the operations building.
- Once rooted, they will be moved into the greenhouse for 2-4 weeks of vegetative growth
- Plants will then be placed into the flowering stage for 8-12 weeks, depending on variety.
- Plants will then be harvested, bucked and moved to the operations building for drying and curing.

The following schedule is an approximation for the year-round cultivation activities anticipating 4-5 runs per year:

Year-round Cultivation Activities		
Location	Flowering	Harvest
Run 1		
Hoop house #1	January 10	February 5
Hoop house #1	January 20	February 15

Hoop house #2	February 1	March 15
Hoop house #2	February 11	March 25
Run 2		
Hoop house #1	April 15	May 9
Hoop house #1	April 25	May 19
Hoop house #2	May 1	May 29
Hoop house #2	May 10	June 5
Run 3		
Hoop house #1	June 1	July 25
Hoop house #1	June 11	August 5
Hoop house #2	June 21	August 15
Hoop house #2	June 31	August 25
Run 4		
Hoop house #1	July 1	August 25
Hoop house #1	July 10	September 5
Hoop house #2	July 21	September 15
Hoop house #2	July 31	September 25
Run 5		
Hoop house #1	October 5	November 29
Hoop house #1	October 15	December 9
Hoop house #2	October 25	December 19
Hoop house #2	Nov 4	December 29

8. Soil Management

The greenhouses will use regenerative soil to limit waste .Amendments will be applied based on standard practices. Items will be purchased, applied, stored and inventoried. Once tilling is completed and soil has been prepared, planting will begin.

9. Cultivation Cycles

The site produces four to five cycles using low intensity mixed-light greenhouses. Each cycle will include:

- Propagation from seeds, purchased clones, and/or clones from Mother plants
- Cloning development
- Vegetation period
- Flowering period
- Harvesting
- Curing
- Processing

Cycle times can vary depending on strain type with 2-4 weeks for vegetation and 8-12 weeks for flowering.

10. Plant Management

During the cultivation cycles, plants are inspected daily. Irrigation is monitored and adjusted based on impact of various factors, mainly heat and humidity. Once plants are placed into greenhouses, they are carefully maintained with periodic topping and pruning until ready to harvest.

11. Processing Practices

After being harvested, the cannabis will be processed offsite until onsite facilities are built. Drying, and curing along with the nursery, will be conducted in the operations building. However, commercial trim operations will not occur until the building has been permitted for commercial use to support the use of employees. Trim machine equipment may also be used to assist with operational efficiency.

Once prepared, the product will be packaged and stored securely in preparation for sales and transport.

12. Staffing

The site will operate as a family farm currently not hiring part-time or full-time employees. Harvesting is planned with the support of up to two third party temporary staff, if needed.

As the farm is near Fortuna, no worker housing will be provided.

13. Security Measures

A number of security measures will be established on the site. They include:

- Owners will live and work onsite.
- There will be two locked gates leading to the property.
- The greenhouse and operations buildings have secured, locked doors.
- There is only one direct road to the property, restricting access.
- Cameras and motion detectors will be installed in strategic locations.
- The greenhouse area is bounded by a barbed wire fence and a seasonal waterway.
- In case of emergency, owners will have phone access to all relevant local response organizations: medical, fire, environmental and police.

14. Health and Safety

If employees are hired this site will be operated as an “agricultural employer” as defined by 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, and comply with all applicable federal, state, and local laws and regulations governing California Agricultural Employers. At the first establishment of 20 or more employees, the firm will sign and enact a Labor Peace Agreement and allow upon written request, all bona fide labor organizations access at reasonable times to areas in which the farm's employees work, for the purpose of meeting with employees to discuss their right to representation, employment rights under state law, and terms and conditions of employment.

An Injury and Illness Prevention Program (IIPP) Plan will be posted. It includes safety protocols including emergency action plan and fire prevention plan, use of personal protective equipment, proper equipment and materials handling, heat illness prevention, employee accident reporting policies and logs, communication of hazards and Material Safety Data Sheets for amendments and chemicals used onsite, and employee training logs.

Posted and available documentation for employees (if applicable) will include:

- *Injury and Illness Prevention Program (IIPP) Plan* - T8 CCR Section 3203 of the General Industry Safety Orders
- *Agricultural Occupations Notice* - Industrial Welfare Commission Order No. 14-2001
- *Professional, Technical, Clerical, Mechanical, and Similar Occupations Notice* - Industrial Welfare Commission Order No. 4-2001
- *Safety and Health Protection on the Job* - Labor Code section 6328
- *California Minimum Wage* - MW-2017 General Minimum Wage Order
- *Healthy Workplaces/Healthy Families Act of 2014 Paid Sick Leave* - Division of Labor Standards
- *Payday Notice* - Labor Code section 207
- *Emergency Numbers* - Title 8 Section 1512 (e), California Code of Regulations
- *Access to Medical and Exposure Records and General Industry Safety Order 3204*
- *Injuries Caused by Work* - Title 8, California Code of Regulations, Division of Workers' Compensation section 9881
- *Whistleblower Protections* - Labor Code Section 1102.8(a)
- *No smoking* signage - Labor Code section 6404.5(c)(1)
- *Farm Labor Contractor Statement of Pay Rates* - California Labor Code Section 1695(7)
- *Insurance and Paid Leave Notice to Employees* - DE 1857A
- *Equal Employment Opportunity is the Law* - EEOC-P/E1 and Americans with Disabilities Act
- *Human Trafficking Public Notice* - Civil Code § 52.6

15. International Dark Sky Standards

Any greenhouse or propagation area with supplemental lighting will be properly maintained to avoid being visible from any neighboring property between sunset and sunrise. The site will comply with International Dark Sky Association standards for Lighting Zone 0, and prevent light

spillage which may impact local wildlife. Any and all complaints received in writing regarding light spillage will be corrected within 10 business days from the date of receipt.

16. Invasive Species Control

Cultivation and operations areas will be monitored at least once a year using publicly available resources to identify potential invasive species. If found, invasive species will be carefully removed manually or using hand tools. If clearing or grading occurs from the removal, the area will be remediated with native seed, straw, or mulch to prevent surface run-off.

17. Access and Parking

The site is accessed from a turn off from Palmer Road. The alley is approximately 500 feet long and averages about 14 feet wide. It is used by the owner and his neighbor. An apron has recently been installed to support any additional traffic turning off from the road due to the operation.

The site will have two designated parking spaces for any third party support staff or visitors.

18. Noise Attenuation

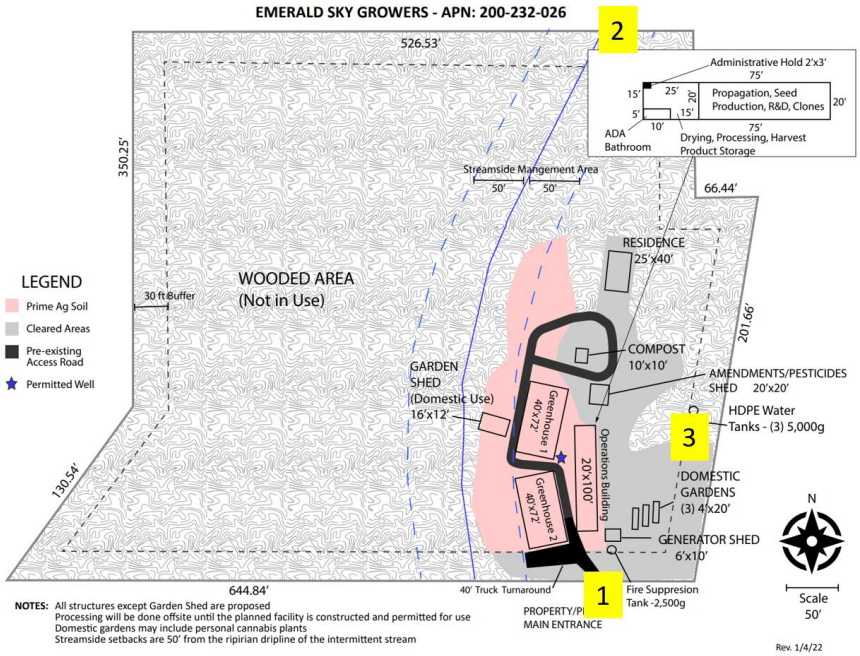
The site will experience typical temporary noise from hand tools, watering, vehicles, and conversations. The loudest, ongoing equipment noise is expected to occur from exhaust fans within the greenhouses, which would exceed the noise of most other equipment onsite. When tested, ambient property noise averaged 34.8db. When the exhaust fans were in operation the noise at the property line did not exceed 50db as required in regulation. (See Appendix)

The site’s backup generator will be housed in the generator shed to maintain ambient noise below the 50db requirement. In addition, equipment used in the processing facility including fans, dehumidifiers, trimming and other equipment will be contained within the structure. The building will be properly sealed during operations to prevent noise from emanating out of open windows or doors..

APPENDIX

Noise Levels

The diagram depicts the areas where the decibel meter was used to take noise level readings. Below the diagram is a table with the reading with the greenhouse completely off and while in operation.



Area	Greenhouse Off	Greenhouse On	Comment
1	32.2 db	37 db	All readings taken on 4/29/2022
2	40 db	47.9 db	60 degrees F, sunny, low wind
3	32.2 db	44.2 db	Time between 10:00 am and 10:30 am

Area 1

Area 2

Area 3

Water Well – Application Approval DHHS

RECEIVED
OCT 21 2020
Humboldt County
Cannabis Svcs.

Department of Health & Human Services

Environmental Health
100 H Street, Suite 100, Eureka, CA 95501
phone: (707) 445-6215 fax: (707) 441-5699

18/19-0263

WATER WELL APPLICATION
CONSTRUCTION – REPAIR – DESTRUCTION

The Well Permit will be returned to the property owner when approved by Humboldt County Division of Environmental Health (DEH)

Instructions:

1. Complete pages 1 and 2 of the application and submit the required fee with the Well Permit application, including Well Driller's signature and property owner's signature.
2. Work on the well shall not be started prior to approval of the Well Permit Application by DEH.
3. Any changes made to the location of a new well shall be approved by DEH prior to commencement of drilling.
4. DEH shall be notified by the Well Driller a minimum of 24 hours prior to sealing the annular space.

Site Address	Palmer Blvd.	APN 200-232-026
City/State/Zip	Fortuna, CA 95540	
Directions to Site		
Applicant	FISCH DRILLING	Contact CHRIS FISCH
Mailing Address	3150 JOHNSON RD	Work Phone (707) 768-9800
City/State/Zip	HYDESVILLE, CA 95547	Cell Phone (707) 601-3042
Property Owner	Emerald Sky Growers c/o Norman Kroon	Home Phone 707-617-0058
Mailing Address	22311 N. Lake Village Drive	Work Phone
City/State/Zip	Katy, TX 77450	Cell Phone

I hereby grant 'right-of-entry' for inspection purposes

Drilling Contractor: FISCH DRILLING — C-57 License # 683865

I hereby agree to comply with all laws and regulations of the County of Humboldt and the State of California Department of Water Resources Bulletin 74 pertaining to water well construction. I will contact Humboldt County Division of Environmental Health (DEH) when I commence work. Within 30 days after completion of work, I will furnish DEH a report of the work performed.

Well Driller Signature: Chris Fisch

Would driller like a copy of approved application? ☑ Yes ☐ No

☐ U.S. Mail address:

☑ Email address: chris@fischdrilling.com

Type of Application:	Construction:		Intended Use:
☑ Construction	Estimated Depth (ft.)		☑ Domestic - private
☐ Destruction	Diameter (in.)	10"	☐ Community Supply
☐ Repair/Modification	Depth of Seal (ft.)	20'	☐ Irrigation
	Sealing Material	Bentonite	☐ Other

E:\Users\Crossley\Downloads\Water Well Permit Application (2).docx Revised 12-14-15

Page 1 of 2

2722

Estimated Work Dates:	Casing:	Type of Sewage System:
Start _____	Diameter (in.) 5"	☐ Community Sewer ☑ OWTS (Septic)
Completion _____	Material PVC	Distance from well site to OWTS n/a

Special Requirements/Comments:

_____

_____

_____

_____

PLOT PLAN

#16674

FOR OFFICE USE ONLY

Fee:	$373.00	Site Approved by:	J. Wheeler
Date:	9-18-18	Site Approved Date:	9/24/18
Receipt:	919605	Sealed to Depth of:	
Project #:	18/19-0263	Seal observed:	☐ Yes ☐ No
		Final Approved Date:	

pd For by Fisch Drilling

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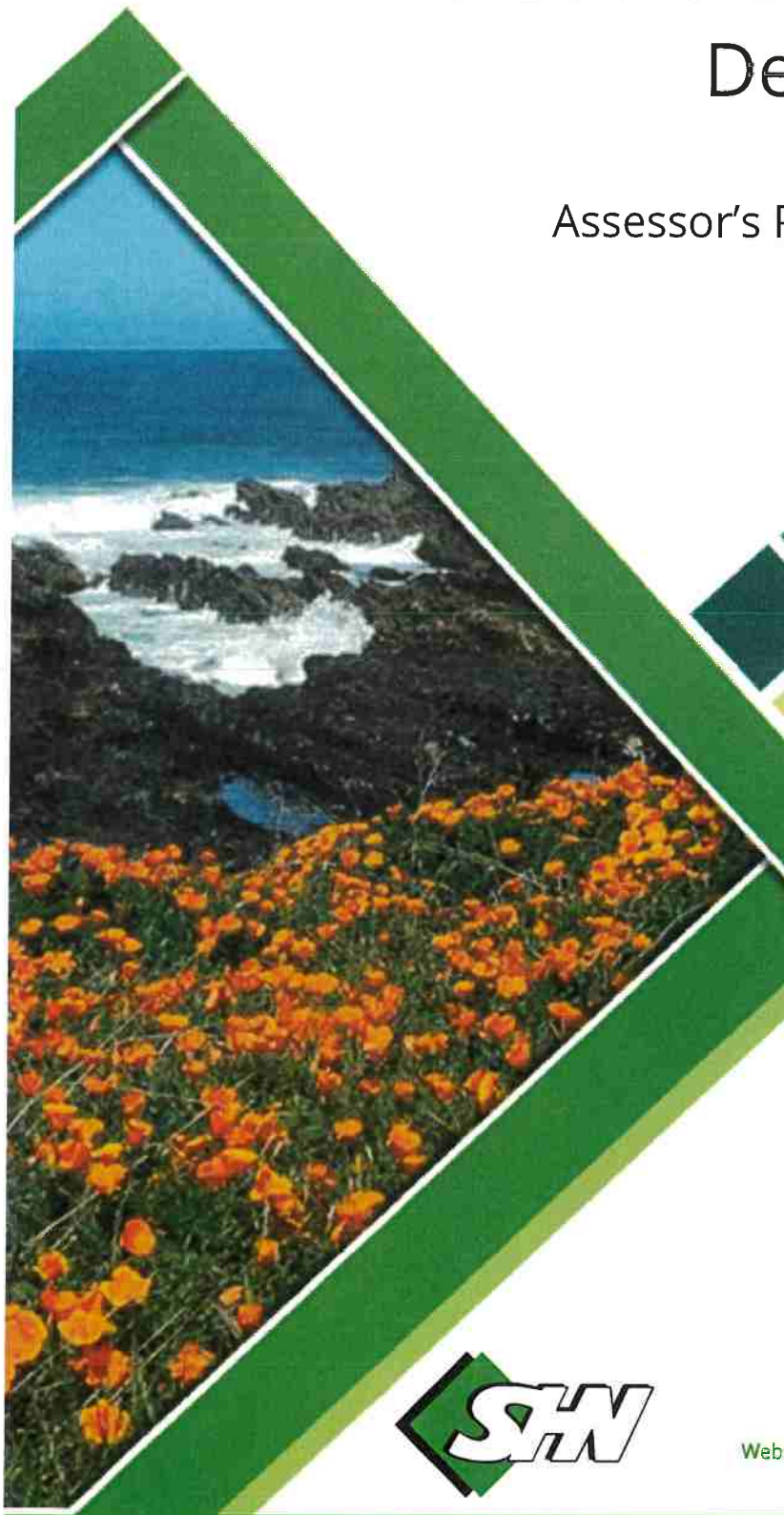
Wetland and Other Waters Delineation Report

16733

Assessor's Parcel Number 200-232-026
636 Palmer Boulevard
Fortuna, California



Prepared for:

Norman Kroon

February 2021

019106

Phone: (707) 822-5785 Email: info@shn-engr.com
Web: shn-engr.com · 1062 G Street, Ste. I, Arcata, CA 95521-5800

Wetland and Other Waters Delineation Report

Assessor's Parcel Number 200-232-026
636 Palmer Boulevard
Fortuna, California

Prepared for:

Norman Kroon

Prepared by:

1062 G Street, Suite I
Arcata, CA 95521
707-822-5785

February 2021

QA/QC: JLS___
Reference: 019106

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Appendices

List of Illustrations

Figures **Follows Page**

Tables **On Page**

Abbreviations and Acronyms

Terms of Measure

in/hr	inches per hour
mmhos/cm	millimhos per centimeter

Additional Terms

APN	Assessor's Parcel Number
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FAC	facultative wetland plant species
FACU	facultative upland plant species
FACW	facultative wet wetland plant species
Ksat	most limiting layer to transmit water
NGTOC	National Geospatial Technical Operations Center
NL	not listed wetland plant status
NOAA	National Oceanic and Atmospheric Administration
NR	no reference
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	obligate wetland plant species
OHWM	ordinary high water mark
redox	redoximorphic
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
TP	test pit
UPL	upland plant species
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirement
WETS	Climate Analysis for Wetlands Tables
WoS	Waters of the State
WoUS	Waters of the United States

1.0 Introduction

SHN has prepared this wetland and other waters delineation report in the vicinity of Fortuna, California for Norman Kroon (Figure 1). Fieldwork was performed by an SHN soil scientist and an SHN botanist, with 18 years of combined wetland and other waters delineation experience.

1.1 Purpose

The purpose of this report is to identify the presence or absence of potential wetlands and other waters of the State (WoS) or United States (WoUS) within the study area (Figure 2), as defined by the United States Army Corps of Engineers (USACE) three-parameter and ordinary high water mark (OHWM) methodologies. No OHWM was delineated as part of this report, however the tributary to Palmer Creek supports an OHWM. Setback requirements related to this project were outlined previously by Greenway Partners. The delineation of these features will help determine setbacks and potential impacts to three-parameter wetland areas and other waters occurring within the project vicinity. The delineation will also aid in project permitting to minimize impacts to potential wetland resources.

1.2 Study Area

The project is located in an unincorporated area near Fortuna, California in Humboldt County (Figure 1; United States Geological Survey [USGS] Fortuna 7.5-minute Quadrangle, Township 2 North, Range 1 West, Section 12, Humboldt Meridian; USGS, 2021). The project is located on a 7.04-acre parcel (Assessor's parcel number [APN] 200-232-026) with central location at latitude and longitude 40.612513° and -124.171527°. The site is accessed from a shared driveway off Palmer Boulevard. The study area is situated in the southeast corner of the parcel at an approximate 125-foot elevation above mean sea level (Figure 2).

2.0 Project Description

Environmental management constraints are being considered for the study area. This report will assist in considering site management options.

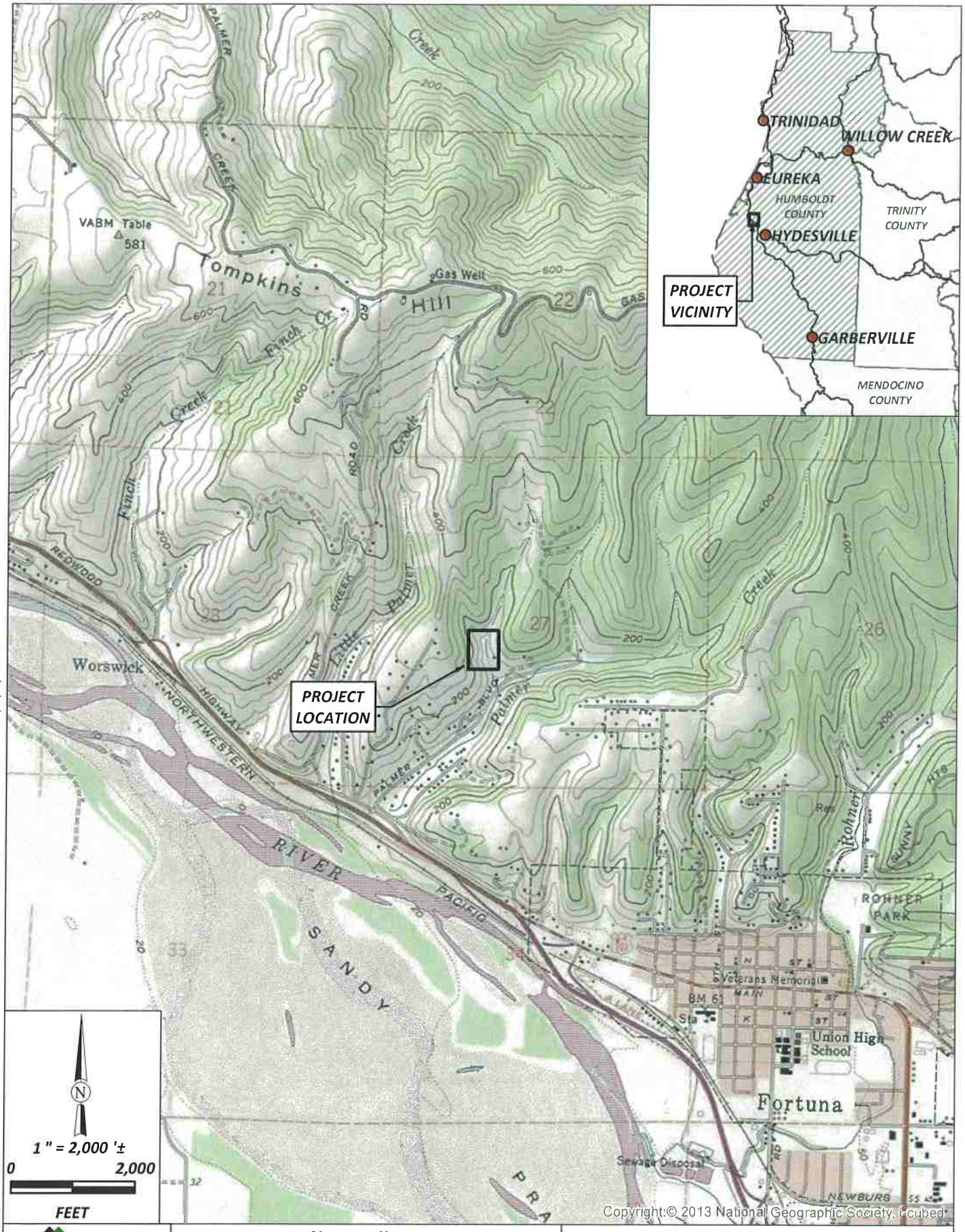
3.0 Environmental Setting

3.1 Site Uses

The site is currently being considered for agricultural-related development and does not contain any permanent structures (Appendix 1, Photo 1). Vegetation has been managed and consists primarily of non-native pasture grasses and forbs with native and non-native woody vegetation along the southern boundary of the study area (Figure 2; Appendix 1, Photo 2).

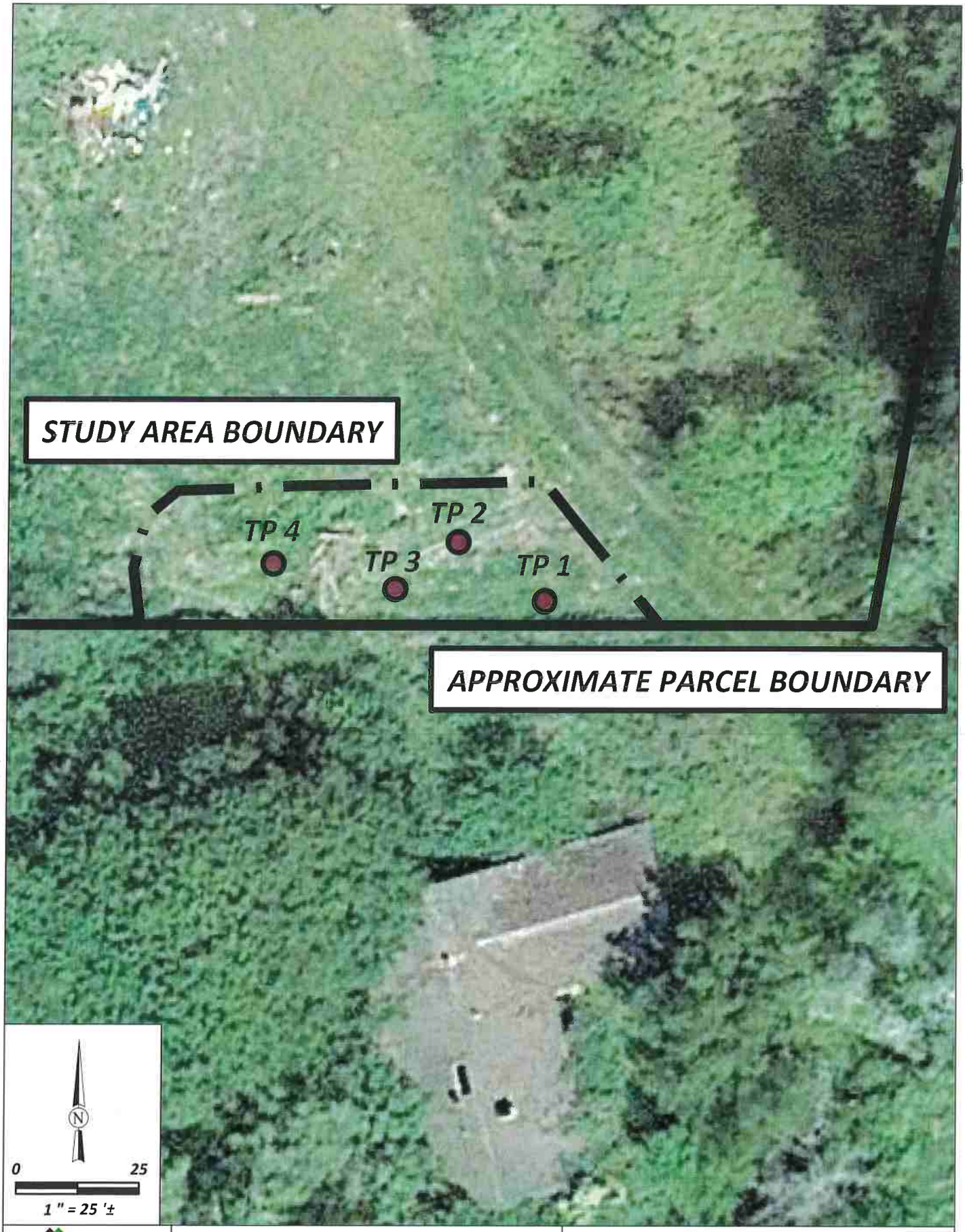
3.2 Site Hydrology

The United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Climate Analysis for Wetlands Table (WETS) method was used to review rainfall conditions for the previous three months prior to the test pit (TP) investigations (or the same month and two months prior if after the 15th; Tables 1 and 2; USDA-NRCS, 2021a). The TP investigations occurred on January 11, 2021. The current 2020 rainfall data for October, November, and December (National Oceanic and



Path: C:\Users\srowe\Desktop\GIS\PROJ_MXD\WDFigure1_ProjectLocationMap.mxd User Name: srowe DATE: 2/17/21, 9:08AM

SHN	Norman Kroon Wetland and Other Waters Delineation Report Palmer Boulevard, Fortuna, California	Project Location Map SHN 019106
	February 2021 | WDFigure1_ProjectLocationMap	Figure 1



Path: C:\Users\srowe\Desktop\GIS\PROJ_MXD\WD2021_Fig2.mxd User Name: srowe DATE: 2/17/21, 6:01PM

	Norman Kroon Wetland and Other Waters Delineation Palmer Boulevard, Fortuna, California	Site Map Showing Wetland Test Pit Locations SHN 019106
	February 2021 | WD2021_Fig2	Figure 2

Atmospheric Administration, 2021) were compared to the 30-year rainfall average at the Woodley Island Weather Forecast Office in Eureka, California (1981-2010 data) for the same months. If the current rainfall of each month is between 30% and 70% of the 1981-2010 precipitation average, it is "normal" rainfall; if above 70%, it is ranked "wetter than normal" rainfall; if below 30%, it is ranked "drier than normal" rainfall.

Table 1. WETS Rainfall Data, January 11, 2021, Hydrological Analysis Eureka, Humboldt County, California

Month	WETS Condition	<30%	>70%	Rainfall (in.)	Condition Value	Weight	Product Value
December 2020	Below Normal	4.78	9.86	3.96	1	3	3
November 2020	Below Normal	3.35	6.8	2.55	1	2	2
October 2020	Below Normal	1.1	2.73	0.41	1	1	1
Total [a]	**DRIER THAN NORMAL**						**6**

[a] A sum of 6-9 prior to site investigation is considered a drier than normal rainfall.
10- prior to site investigation is considered a normal rainfall.
15-18 prior to site investigation is considered a wetter than normal rainfall.
Sources: NOAA, 2021; USDA-NRCS, 2021a

The WETS data indicates that the 2020 fall season, just prior to the January 11 delineation, averaged "drier than normal" rainfall for the January 2021 field assessment (Table 1).

3.3 National Wetlands Inventory

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) website (Appendix 2) does not contain any mapped wetlands within the study area. This general categorization by the NWI is not intended for planning purposes because of the lack of ground-truthing. In the "Data Limitations, Exclusions and Precautions" disclaimer, it states that:

> "The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high-altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis."
> (USFWS, 2021)

The intent of this delineation is to perform a site-specific, detailed examination for wetland characteristics to determine wetland boundaries with the addition of onsite soils, hydrology, and vegetation investigations not used in NWI mapping.

4.0 Vegetation

The wetland indicator status of plant species for this investigation was based on the *Western Mountains, Valleys, and Coast 2018 Regional Wetland Plant List* (USACE, 2018). Synonyms were checked for species that did not appear on the USACE wetland plant list. Plant species were classified as:

- Obligate (OBL)–almost always occurs in wetlands
- Facultative wet (FACW)–usually occurs in wetlands, but may occur in non-wetlands
- Facultative (FAC)–occurs in wetlands and non-wetlands
- Facultative upland (FACU)–usually occurs in non-wetlands, but may occur in wetlands
- Upland (UPL)–almost never occurs in wetlands
- Not listed (NL)–scored as an upland plant and calculated as such on wetland determination forms

During the January 2021 wetland investigation, botanical species were recorded (Appendix 3, Data Forms). The majority of the study area (TPs 1-4) is on silt loam and has been used for personal vegetable-gardening purposes or has been left vacant since the acquisition of the land by the current landowner. TPs were excavated within historically-placed fill material. Non-native vegetation cover dominates the study area, reflecting the long-term anthropocentric use of the parcel. Areas immediately adjacent to the study area have also recently been seeded with non-native grass and pasture species (Appendix 1, Photo 3). Dominant species within the study area included white clover (*Trifolium repens* [FAC]), common velvetgrass (*Holcus lanatus* [FAC]), creeping buttercup (*Ranunculus repens* [FAC]), and orchard grass (*Dactylis glomerata* [FACU]). Vegetation indicative of wetlands were observed immediately to the south of but not within the study area. These species were recorded within the tree stratum when observed within a 30-foot radius (Appendix 3, Data Forms).

See Section 7.1 Vegetation Methods and Section 8 Discussion and Results for vegetation composition at each TP.

5.0 Geologic and Soil Composition

The study area is located on an uplifted, folded, and dissected marine terrace. The site is mapped as being underlain by the Hookton formation (Kilbourne, 1985). This middle to late Pleistocene-age material is described as a well to poorly sorted, gently folded, unindurated marine, grading to nonmarine sand, gravel, and silt.

The underlying soils in the study area have a USDA classification of Cannonball-Candymountain-Leopoil complex, 30 to 50 percent slopes (map unit 233). See Appendix 2 for the USDA soil map of the area. The site-specific soil description at each exploratory soil TP is included in the wetland determination data forms found in Appendix 3, with photos in Appendix 1.

233—Cannonball-Candymountain-Lepoil complex, 30 to 50 percent slopes

Map Unit Composition
Cannonball and similar soils: 40 percent
Candymountain and similar soils: 30 percent

Lepoil and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cannonball
Setting
Landform: Erosion remnants
Landform position (two dimensional): Backslope
Landform position (three-dimensional): Tread Down-slope
shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits
Typical profile
A1 - 0 to 9 inches: silt loam
A2 - 9 to 28 inches: silt loam
ABt - 28 to 35 inches: silt loam
Bt1 - 35 to 47 inches: sandy clay loam
Bt2 - 47 to 59 inches: gravelly sandy clay loam
Btg - 59 to 75 inches: gravelly silty clay loam
Properties and qualities
Slope: 30 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 high (0.20 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 capacity: 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 Candymountain
Setting
Landform: Hills on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Mixed marine deposits derived from sedimentary rock
Typical profile
Oi - 0 to 6 inches: slightly decomposed plant material
A1 - 6 to 9 inches: sandy loam
A2 - 9 to 17 inches: sandy loam
A3 - 17 to 28 inches: sandy loam
Bw - 28 to 37 inches: fine sandy loam

C1 - 37 to 47 inches: loamy fine sand
C2 - 47 to 63 inches: sand
C3 - 63 to 71 inches: sand
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 capacity: High (about 9.2 inches)
Interpretive Groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Lepoil
Setting
Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium
Typical profile
A - 0 to 7 inches: loam
AB - 7 to 19 inches: loam
Bt1 - 19 to 31 inches: loam
Bt2 - 31 to 45 inches: loam
Bt3 - 45 to 55 inches: loam
Bt4 - 55 to 63 inches: clay 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 (0.20 to 2.00 in/hr)
Depth to water table: About 39 to 59 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 capacity: High (about 10.4 inches)
Interpretive Groups
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components
Timmons, Hydric soil rating: No
(USDA-NRCS, 2021b)

6.0 Regulatory Setting

6.1 Federal Laws

6.1.1 Section 401 and 404 of the Clean Water Act

Under Section 404 of the Clean Water Act (CWA; 33 U.S. Code [USC] 1344; U.S. Code of Federal Regulations (CFR), 1986), as amended, the USACE and the United States Environmental Protection Agency (EPA) retain primary responsibility for regulating discharge of dredged or fill material into "navigable waters of the United States." All discharges of dredged or fill material into jurisdictional WoUS that result in permanent or temporary losses of WoUS are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other WoUS, unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

In summary, the definition of WoUS as defined by 33 CFR Section 328.3 includes:

1. waters used for commerce,
2. interstate wetlands,
3. all other waters (including lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds),
4. impoundments of water,
5. tributaries to aforementioned waters,
6. territorial seas, and
7. wetlands adjacent to waters.

Under 33 CFR 328.3, WoUS do not include prior converted cropland or waste treatment systems.
In 2008, the EPA and USACE released a guidance memorandum implementing the Supreme Court's decision in the cases of the Rapanos v. U.S. and Carabell v. U.S. Because of these cases, the agencies will apply a significant nexus standard to the following categories of waterbodies to determine if it meets the definition of WoUS:

- Non-navigable tributaries that are not relatively permanent
- Wetland adjacent to non-navigable tributaries that are not relatively permanent
- Wetland adjacent to but that does not directly abut a relatively permanent tributary

Section 401 of the CWA (33 USC 1341) requires that applicants for a federal license or permit obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards (EPA, 1986). The certification is obtained from the state in which the discharge originates or

would originate, or if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

6.1.2 Rivers and Harbors Appropriation Act of 1899

The River and Harbors Appropriation Act of 1899 addresses activities that involve the construction of dams, bridges, dikes, and other structures across any navigable water. Placing obstructions to navigation outside established federal lines and excavating from or depositing material in such waters require permits from the USACE. Section 10 of the Rivers and Harbors Appropriation Act (33 USC 403) prohibits the unauthorized obstruction or alteration of any navigable WoUS.

6.2 State Laws

6.2.1 California Coastal Act

This study area is outside of the California Coastal Act jurisdiction.

6.2.2 Porter-Cologne Water Quality Control Act

The State of California maintains independent regulatory authority over the placement of waste, including fill, into WoS under the Porter-Cologne Water Quality Control Act. WoS are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. WoS are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact WoS are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit but does involve activities that may result in a discharge to WoS, then the local RWQCB has the option to regulate such activities under its state authority in the form of waste discharge requirements (WDRs) or certification of WDRs. Water Quality Order No. 2004-0004-DWQ specifies general WDRs for dredge or fill discharges to waters deemed by the USACE to be outside of federal jurisdiction under Section 404 of the CWA.

7.0 Methods

Wetland delineation fieldwork was conducted on January 11, 2021. Wetland delineation methods described in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and *The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE, 2010) were used to identify potential wetlands and other waters. The routine method for wetland delineation described in the Environmental Laboratory 1987 manual was used to identify potential wetlands within the study area. The USACE method relies on a three-parameter approach, in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology must each be met (present at the point of field investigation) to conclude that an area qualifies as a wetland. The study area is within County of Humboldt jurisdiction outside of the Coastal Zone, which relies on a three-parameter wetland definition for determining the presence and extent of wetland.

Hydrophytic vegetation refers to plant species known to be adapted to wetland sites. To classify the hydrophytic plants onsite, the most recent *Western Mountains, Valleys, and Coast 2018 Regional Wetland Plant List* was used (USACE, 2018). Hydric soils are those formed under saturated conditions, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (USDA-NRCS, 2018). Wetland hydrology is demonstrated through direct evidence (primary indicators) or indirect evidence (secondary indicators) of flooding, ponding, or saturation for a significant portion of the growing season (USACE, 2010).

Prior to conducting the field investigation, SHN staff reviewed the USGS topographic quadrangle map (Figure 1); Google Earth (Google Earth, 2021); USDA-NRCS Web Soil Survey website (USDA-NRCS, 2021b); and NWI map (USFWS, 2021; Appendix 2). Visual inspection of the site prior to TP excavation was performed to identify appropriate TP locations and potential wetland locations and boundaries. During the TP subsurface investigation, sample points were characterized at each pit for the botanical, hydrological, and soil parameters. Wetland TP locations were selected to:

- achieve appropriate coverage and characterization of wetland and upland habitats,
- document potential changes in the vegetative community (such as a shift in the dominant species), and
- determine the approximate boundary line between wetlands and uplands by evaluating the extent of key wetland criteria (hydrology, hydric soils, and hydrophytic vegetation).

TP locations were mapped using a Trimble sub-meter GPS unit with a Trimble R1 receiver to achieve submeter accuracy.

7.1 Vegetation Methods

Prior to the wetland field investigation, a review of plant species reported to be within the study area was performed by querying the *Consortium of California Herbaria* (Consortium of California Herbaria, 2021) database records and *Calflora* (Calflora, 2021) observations. It was determined that the site investigation was performed during a drier than normal rainfall period in January 2021 by reviewing rainfall data (see Section 3.2 Site Hydrology, Table 1). Absolute percent cover of each plant species was visually estimated within the sample point and within each vegetation stratum. The tree stratum was inspected at a 30-foot radius centered on the sample point, and the herb and sapling/shrub strata, at a 5-foot radius. Botanical nomenclature follows *The Jepson Manual, Vascular Plants of California* (Baldwin et al., 2012) in addition to the online Jepson Interchange (University of California, Berkeley, 2021) for verification of species whose taxonomy may have changed since its publication.

The 50/20 method[1] was applied to each stratum to determine the dominant plant species within the vicinity of the test pit. Hydrophytic vegetation criteria requires dominance by hydrophytic vegetation. If hydric soils and wetland hydrology were present, the prevalence index[2] was applied. The occurrence and type of plant cover determine whether jurisdictional areas are identified as satisfying the vegetation criteria of a wetland or other waters. Sites displaying wetland hydrology and hydric soil, but with little or no plant cover, or other sites not capable of supporting hydrophytic plant communities in normal circumstances, may be wetlands as defined by the state of California. Those sites with little or no plant cover, or other sites not capable of supporting hydrophytic plant communities in normal circumstances are identified as other waters, provided they have an OHWM.

7.2 Soils Methods

Soils were field verified for the presence or absence of hydric conditions. All TPs were manually excavated using hand tools to a depth of 24 inches, due to the "drier than normal" hydrologic season. The thickness of each soil horizon was measured. The Munsell Soil Color Chart (Munsell, 2018) was referenced to determine the colors of the moist soil matrix and redoximorphic (redox) features (if present). Soils were closely inspected for hydric soil indicators, as defined by the NRCS "Field Indicators of Hydric Soils in the United States" (USDA-NRCS, 2018).

7.3 Hydrology Methods

Observations for wetland hydrology were made during TP excavations on January 11, 2021. Wetland hydrology is determined by the presence of surface and/or ground water in addition to indirect hydrologic indicators (such as, water marks, drift deposits, sediment deposits, drainage patterns, geomorphic position, water-stained leaves, and similar features). Indicators of extended periods of saturation would include oxidized rhizospheres surrounding living roots or the presence of reduced iron or sulfur in the soil profile. A site must contain at least one primary indicator or two secondary indicators to qualify for the hydrology parameter (Section 3.2, Site Hydrology). In addition, aerial imagery was reviewed that may show past inundation, seasonal inundation patterns, or changes onsite that may have influenced hydrology.

8.0 Discussion and Results

Wetland field investigations were conducted on January 11, 2021. Visual inspection of the study area prior to TP excavation revealed moderately drained to well drained soils, with pasture grasses used for stabilization and erosion prevention purposes. The study area consisted of silt loam over historic fill material with predominantly ruderal vegetation. Four TPs were excavated by hand (Figure 2), and data for each TP was recorded for soils, vegetation, and hydrology on USACE Wetland Determination Data Forms (Appendix 3). The investigation occurred during a drier than normal rainfall period within the growing season for this region (Section 3.2, Site Hydrology). Normal circumstances were considered present in all locations. Hydrophytic vegetation presence was determined using the Dominance Test or Prevalence Index if hydric soils and wetland hydrology were present. See the discussion sections below for each TP, which describe the physical features and considerations of the site, followed by a data section that summarizes information from the completed USACE Wetland Determination Data Forms. A map of the study area is included as Figure 2 and photos of the study area are presented in Appendix 1.

8.1 TP1

8.1.1 Discussion TP1

The TP1 location was chosen as a representative sample of the majority of the study area and is positioned at a lower elevation (Figure 2; Appendix 1, Photo 4). One wetland parameter is present and is therefore not considered a USACE wetland.

8.1.2 Data TP1

TP1 vegetation contained an herb stratum and woody vine stratum. The dominant vegetation consisted of common velvet grass [FAC] with 35 percent cover and Canada thistle (*Cirsium arvense* [FAC]) with 20 percent cover. The hydrophytic vegetation parameter was met.

No hydric soil indicators were observed; therefore, the hydric soils parameter was not met. The study area is situated on a slope and is likely in a transition between upland and wetland areas, with strong wetland indicators present south of the property.

No wetland hydrology indicators were observed.

Results from TP1 are representative of conditions across the entire lower portion of the parcel west of the access road that was not used for vegetable gardening purposes in previous years.

8.2 TP2

8.2.1 Discussion TP2

TP2 is located west of TP1, within the primary study area in the southwest portion of the parcel. This portion of the parcel is a transitional area between an elevated terrace and the toe of the slope. This area was investigated to identify if a wetland transition could be observed. Hydrophytic vegetation was dominant within this area but reflected disturbance and manipulated conditions related to previous seeding. One wetland parameter is present and is therefore not considered a USACE wetland.

8.2.2 Data TP2

TP2 vegetation contained only an herb stratum. The dominant vegetation was observed to be common velvet grass [FAC] with 30 percent cover and Italian rye grass (*Festuca perennis* [FAC]) with 8 percent cover. Hydrophytic vegetation is dominant; however, these species reflect management rather than wetland conditions, as evidenced by the lack of hydric soil indicators and the presence of the upland species with low cover. The distribution of problematic facultative vegetation in combination with upland vegetation is also shown by a prevalence index of 3.31. Therefore, TP2 is not considered to have hydrophytic vegetation.

Soils showed no hydric soil indicators. Faint redox was observed at 1% in the second horizon and was mixed with occasional gravel fill material. Prominent redox was observed in native soil starting at a 19-inch depth. Soils in this TP did not react with alpha, alpha-dipyridyl solution.

Wetland hydrology was observed with a water table present, starting at a 21-inch depth and saturation present at a depth of 9 inches.

8.3 TP3

8.3.1 Discussion TP3

TP3 is situated west of TP1 and TP2, located at the eastern edge of the previously used garden area and contained disturbed conditions from last year (Appendix 1, Photo 5). One wetland parameter is present and is therefore not considered a USACE wetland.

8.3.2 Data TP3

TP3 vegetation contained an herb stratum and tree stratum. The dominant vegetation consisted of the following: poison hemlock (*Conium maculatum* [FAC]) with 25 percent cover, Italian rye grass [FAC] with 20 percent cover, red alder (*Alnus rubra* [FAC]) with 5 percent cover, and arroyo willow (*Salix lasiolepis* [FACW]) with 10 percent cover. The observed tree stratum originated from outside the study area and outside of the property boundary. The hydrophytic vegetation parameter was met.

No hydric soil or wetland hydrology indicators were observed.

8.4 TP4

8.4.1 Discussion TP4

TP4 is west along the transect from TP3. Vegetation was disturbed from previous garden uses. One wetland parameter was observed and is therefore not considered a USACE wetland.

8.4.2 Data TP4

TP4 vegetation contained an herb stratum, tree stratum, and woody vine stratum. The dominant vegetation consists of the following: red alder [FAC] with 3 percent cover, arroyo willow [FACW] with 5 percent cover, wild radish (*Raphanus sativus* [UPL]) with 20 percent cover, poison hemlock [FAC] with 25 percent cover, and Himalayan blackberry (*Rubus armeniacus* [FAC]) with 2 percent cover. The observed tree stratum originated from outside the study area and the property boundary. The hydrophytic vegetation parameter was met.

No hydric soil or wetland hydrology indicators were observed.

8.10 Ordinary High Water Mark

No OHWM was delineated as part of this report, however the tributary to Palmer Creek supports an OHWM. Setback requirements related to this project were outlined previously by Greenway Partners.

9.0 Conclusions

This region experienced a drier than normal seasonal rainfall volume in the three months preceding the January 11, 2021 fieldwork (Section 3.2 Site Hydrology). Based on topography, management, and soil conditions, the characteristics recorded at each TP and described in this report are representative of site upland and wetland conditions throughout the study area. Table 2 describes the number and type of parameters met at each of the four TPs. Figure 2 shows the TP locations within the study area.

Table 2. Parameters Met at Each Test Pit, January 11, 2021
Humboldt County, California

TP[a] Number	Parameters Met	Parameter Type	Latitude/Longitude
TP1	1	Hydrophytic Vegetation	40.612123°/-124.171301°
TP2	1	Hydrology	40.612107°/-124.171437°
TP3	1	Hydrophytic Vegetation	40.612144°/-124.171388°
TP4	1	Hydrophytic Vegetation	40.612106°/-124.171338°

[a] TP: test pit

While TPs 1, 3, and 4 have hydrophytic vegetation dominance, vegetation composition was representative of disturbance and seeding. No wetlands were observed within the study area (Figure 2).

9.1 Buffer Recommendation

Additional jurisdictional waters occur within an unnamed tributary of Palmer Creek to the west of the study area. No wetlands were observed within the study area. As such, the following buffers are recommended:

- The study area contains previous disturbance and management; therefore, a change in development will not substantially alter environmental conditions within the study area, which lacks native vegetation communities and wetland buffer habitat.

Future development can improve the conditions of the site by incorporating the following suggestions:

- Any proposed development should be sited as far from the unnamed tributary to Palmer Creek as is feasibly possible.
- Project design should incorporate native vegetation species and invasive species management.
- Any increase in stormwater runoff resulting from an increase in impermeable surfaces should be captured and infiltrated prior to reaching any wetland area or OHWM drainageway.

10.0 Limitations

The conclusions in this report represent conditions at the time of field work and conditions may have changed since the completion of this study. In addition, some species may not have been identifiable or may not have been present at the time of the wetland delineation. This report documents the investigation by using the best professional judgment of SHN's botanist and soil scientist.

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Site Photographs

1

Photo 1: Looking north across the study area. Photo taken January 11, 2021.

Photo 2: Looking southwest from driveway to southern border of study area. Photo taken January 11, 2021.

Photo 3: Note invasive plant species abutted to recently seeded area. Photo taken January 11, 2021.

Photo 4: Looking east towards TP-1 at base of slope, in an area that would have the most potential for a wetland site. Photo taken January 11, 2021.

Photo 5: Looking west at TP-3 across the study area towards TP-4 in disturbed garden spot. Photo taken January 11, 2021.

National Wetlands Inventory Map and NRCS Soil Maps

2

U.S. Fish and Wildlife Service

National Wetlands Inventory

Emerald Sky

January 8, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Custom Soil Resource Report
Soil Map

Wetland Determination Data Forms

3

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Emerald Sky City/County: Humboldt Sampling Date: 1/11/21
Applicant/Owner: Kroon State: CA Sampling Point: TP 1
Investigator(s): Sean Rowe / Cindy Wilcox Section, Township, Range: T1NR1W SEC 12
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 3-5
Subregion (LRR): MLRA 4B Lat: 40.612123 Long: -124.171301 Datum: WGS
Soil Map Unit Name: Cannonball-Cappaynton-Leopol complex NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks: Below normal rainfall (WETS)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5A)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Holcus lanatus	35	Y	FAC
2. Carex pycnocephalus	14	N	NL
3. Centaurea saxatilis	1	N	FACU
4. Geranium dissectum	5	N	NL
5. Vicia sativa	1	N	UPL
6. Plantago lanceolata	1	N	FACU
7. Cynosurus echinatus	20	Y	FAC
8. Cerium macilatum	5	N	FAC
9. Festuca perennis	5	N	FAC
10. Dactylis glomerata	2	N	FACU
11. Poa trivialis	3	N	FAC
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. Rubus armeniacus	1	N	FAC
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of	Multiply by
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: TP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					SiL	wire & rope debris
12-17	10YR 2/1	100					SiCL	brick piece @ 17" compacted
17-24+	10YR 4/2	70	7.5YR 5/8	30	C	M	CL	native? 17"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

no alpha-alpha-dipyridyl reaction in 0-12 or 12-17" horizons

Below terrace placement (fall 2019) 0-12" loose fill, 12-17 compacted, 17+ native?

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): 0

Water Table Present? Yes _____ No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): 12"

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No water table below saturation zone ≠ A3

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Emerald Sky City/County: Humboldt Sampling Date: 1/11/21
Applicant/Owner: Kroon State: CA Sampling Point: TP2
Investigator(s): Sean Rowe / Cindy Wilcox Section, Township, Range: T2NR1W SEC 12
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): MLRA 4B Lat: 40.612106 Long: -124.171338 Datum: WGS
Soil Map Unit Name: Cannonball-Candymtn-Leopol complex NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)
Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ✓
Hydric Soil Present? Yes ____ No ✓
Wetland Hydrology Present? Yes ✓ No ____
Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Drier than normal rainfall year (WETS)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Holcus lanatus	30	Y	FAC
2. Cirsium arvense	4	N	FAC
3. Leontodon saxatilis	1	N	NPL
4. Bellis perennis	3	N	UPL
5. Geranium dissectum	3	N	UPL
6. Juncus effusus	2	N	FAC
7. Carex vulpina	5	N	FAC
8. Juncus patens	2	N	FACW
9. Vicia sativa	2	N	UPL
10. Dactylis glomerata	5	N	FACU
11. Festuca perennis	8	Y	FAC
	65 = Total Cover		
Woody Vine Stratum (Plot size: 5ft)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	49	x 3 =	147
FACU species	6	x 4 =	24
UPL species	8	x 5 =	40
Column Totals:	65 (A)		215 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes Y* No X

Remarks: passed dominance test – Vegetation is problematic and significantly disturbed due to earthwork, disturbance, and seeding. Facultative vegetation was determined to not be acting as hydrophytes. See data section in report for TP2.

SOIL

Sampling Point: TP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3.5	10YR 2/2						SiL	
3.5-19	10YR 3/1	99	10YR 5/4	1	C	M	SiCL	faint redox w/occ gravel
19-24+	10YR 3/2	60	10YR 5/8	30	C	M	SiCL	prominent redox (nature)
			10YR 7/2	10	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks: alpha alpha D did not react w/in 12 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 21"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 9"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

4.5 ft away - higher water table

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Emerald Sky City/County: Humboldt Sampling Date: 1-11-21
Applicant/Owner: Kroon State: CA Sampling Point: TP-3
Investigator(s): Sean Rowe / Cindy Wilcox Section, Township, Range: T2NR1W SEC 12
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 35
Subregion (LRR): MLRA 4B Lat: 40.612144 Long: -124.171388 Datum: WGS
Soil Map Unit Name: Cannonball-Caddymtn-Leopol complex NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ~~X~~	No X	

Remarks: At edge of garden area - disturbed from last year. Below normal rainfall (WETS)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	5	Y	FAC
2. Salix lasiolepis	10	Y	FACW
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Cocosia mendocinum	25	Y	FAC
2. Cirsium arvense	10	N	FAC
3. Festuca perennis	20	Y	FAC
4. Leontodon saxatilis	2	N	FACU
5. Rumex crispus	1	N	FAC
6. Poa pratensis	15	N	FAC
7. Trifolium repens	7	N	FAC
8. Geranium dissectum	3	N	UPL
9.			
10.			
11.			
	83	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 17

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: TP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					SIL	
10-14	10YR 4/3	99	7.5YR 5/8	1	C	M	SICL	Fill, w/ brick pieces
14-24	10YR 4/3	89	7.5YR 5/8	8	C	M	SCL	brick pieces / charcoal - Fill w/ occ gravel (rd)
			10YR 4/3	3	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks: no a-a-d reaction w/12"
10-24" compacted fill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Emerald Sky City/County: Humboldt Sampling Date: 1/11/21
Applicant/Owner: Kroon State: Sampling Point: TP-4
Investigator(s): Sean Rowe / Cindy Wilcox Section, Township, Range: T2NR1W SEC 12
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 3-5
Subregion (LRR): MLRA 4B3 Lat: 40.612107 Long: -124.171437 Datum: WGS
Soil Map Unit Name: Cannonball-Candymtn-Leopol complex NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	3	Y	FAC
2. Salix lasiolepis	5	Y	FACW
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5ft)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size 5ft)			
1. Raphanus sativus	20	Y	UPL
2. Carum carvi	25	Y	FAC
3. Festuca arundinacea	10	N	
4. Festuca perennis	10	N	
5. Cirsium arvense	2	N	
6. Trifolium repens	2	N	
7. Leontodon saxatilis	3	N	
8. Dactylis glomerata	10	N	
9. Geranium dissectum	T	N	
10. Lotus corniculatus	T	N	
11.			
	82 = Total Cover		
Woody Vine Stratum (Plot size: 5ft)			
1. Rubus armeniacus	2	Y	FAC
2.			
	2 = Total Cover		

% Bare Ground in Herb Stratum 16

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
old garden bed
tag for Cayuse Wild by Tradewinds present

SOIL

Sampling Point: TP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	100					SiL	Fill
8-17	10YR 3/2	100					SiL	Fill acc. gravel w/ charcoal
17-24	10YR 4/2	90					SCL	Fill acc. gravel w/ charcoal
	10YR 3/2	90					SCL	iron debris

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

roots throughout

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Biological

Biological Resource Assessment Report

Biological Resource Assessment Report for APN 200-232-026

June 2019

Prepared For:

Norman Kroon

Prepared By:

TransTerra Consulting

INTEGRATED ENVIRONMENTAL SERVICES

Biological Resource Assessment
June 2019

Introduction

This Biological Resource Assessment was prepared to provide data concerning the type and extent of biological resources under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and US Fish and Wildlife Service (USFWS) that are currently or potentially present at the project location. The project includes commercial cannabis cultivation and associated activities. If required after agency review of the preliminary habitat assessment, protocol level surveys will be completed per recommendations by the Final Environmental Impact Report (FEIR) amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. [1]

Environmental Setting

Project Location

The property is located off Palmer Boulevard in Fortuna of Humboldt County, California (Section 27, T3N, R1W). The project area is located on a 7.04-acre parcel within the U.S. Geological Survey's (USGS) Fortuna 7.5-minute quadrangle map. Elevation is approximately 120-310 feet above sea level. Property is located in the Lower Eel Watershed. The regional climate is Mediterranean in nature with warm summers and cool winters.

Soil, Topography, Hydrology

Three (3) soil types are mapped in the project areas on the Web Soil Survey.[2] The property area is primarily composed of Cannonball-Candymountain-Leopoil complex (233). These soils are not considered hydric and consist of very deep, moderately well drained soils formed in marine deposits derived from mixed sources. They all have mean annual precipitations of about 1500 mm and the mean annual temperatures around 11 degrees C. The Cannonball series are on nearly level to steep slopes of dissected marine terraces and have slopes of 0 to 50 percent. It consists of particle sizes of rock fragments (gravel 0-10%) and clay (25-34%). The soil is usually moist in all parts in the soil moisture control section in most years but becomes nearly dry in the upper part from about September 15 to October 15 in most years. The Cannonball soils have a udic soil moisture regime. The Candymountain series are on uplifted marine terraces and hillslopes on slopes of 0 to 75 percent. This soil is well drained with surface runoff under bare soil conditions being moderate and a moderately high saturated hydraulic conductivity. It consists of particle sizes of clay content (11-17%). The Lepoil series are on nearly level to steeply sloping, dissected marine terraces and have slopes 0 to 50 percent. Steep sloping terrace sides have had the riser component replaced by a hillslope component. The Lepoil soils are well drained with low to medium runoff and moderately low saturated hydraulic conductivity. It consists of particle sizes of rock fragments (gravel and paragravel 0-5%) and clay content (25-30%).

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[1] Final Environmental Impact Report :Amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. January 2018. Prepared by Ascent Environmental. (Accessed via https://humboldtgov.org/DocumentCenter/View/62689/Humboldt-County-Cannabis-Program-Final-EIR-60mb-PDF)

[2] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. (Accessed via https://websoilsurvey.sc.egov.usda.gov/.)

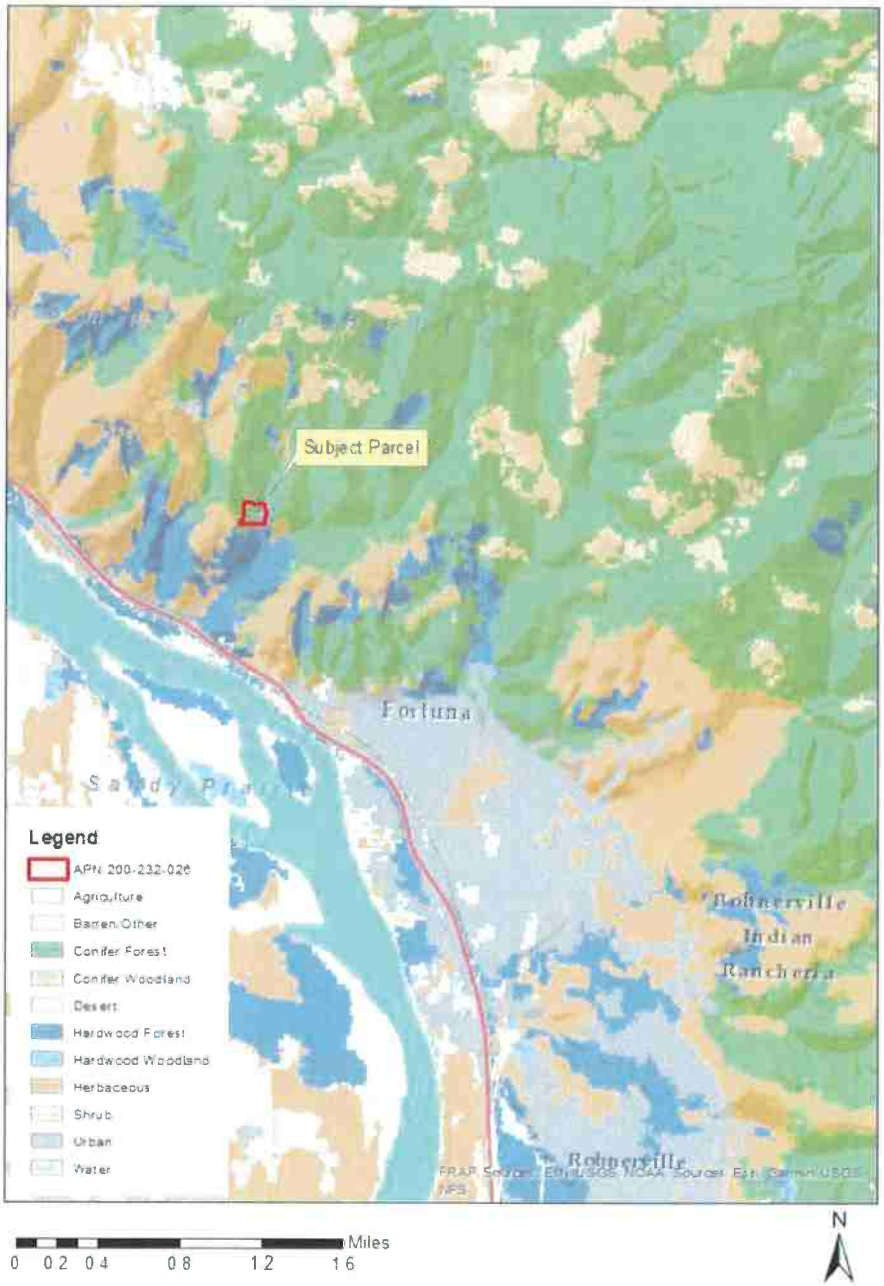

Figure 1. Project Location. Map created using ArcMap 10.6 and California Vegetation WHR types

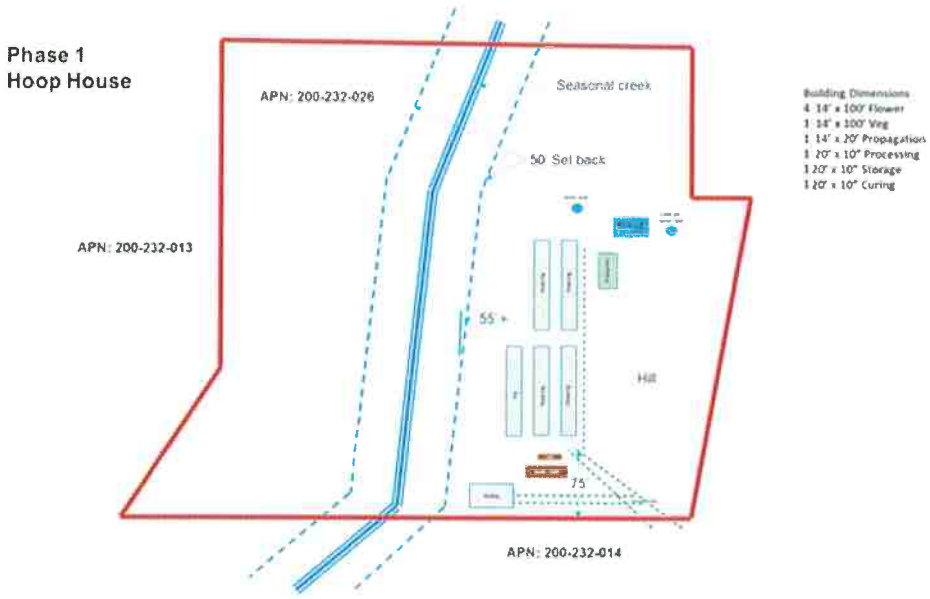

Figure 2. Proposed Project (prepared by Green Roads)

The property is situated in Strongs Creek-Eel River watershed which is in the Lower Eel watershed. Per the Humboldt County GIS layer, the Streamside Management Area of an unnamed tributary off of Palmer Creek bisects the property. Project areas are approximately 55 feet away from the unnamed tributary's Streamside Management Area buffer. The NWI and Humboldt GIS layers show riparian wetlands on the property adjacent to the tributary. The location of the stream and wetlands are not accurate in the Humboldt County Web GIS. Green Roads Consulting surveyed the streambanks and mapped the stream and buffers. **(Figure 2)**

The project area is mapped as possessing high levels of instability and historic landslides. Potential liquefaction, fault lines and other hazards are not mapped in or adjacent to the parcel on the Humboldt GIS database.

Figure 3. Streamside Management Areas (SMA) and National Wetland Inventory (NWI) wetlands mapped in and adjacent to the project site[3]. The stream is not accurately mapped in these layers. The correct location of the stream and buffer are presented in Figure 2 above.

Methods

The California Natural Diversity Database (CNDDB) RareFind and Spotted Owl Database, and California Native Plant Society (CNPS) databases were used to assess potential rare species. A habitat assessment was conducted by TransTerra Consulting Biologists Tamara Camper, Adrian Macedo and Megan Nibbelink on May 22, 2019. The assessment evaluated listed species and species of special concern (SOC). The study area was scanned for wildlife sign including tracks, scat, tree habitat (cavities, nests scrapes or accumulated vegetation) as well as special habitat types and habitats associated with rare plant species. The observations were concentrated around the cultivation site, road and watercourse. The CNDDB 9-Quad area was queried to generate occurrences of special-status animal species.

The assessment was conducted due to mandatory requirements for cannabis permitting, however the timing of the field visit did not coincide with ideal survey seasons based on phenology and life history cycles for all potential species. Full floristic surveys and/or protocol-level surveys were not conducted in

[3] Humboldt County GIS layer. (Accessed via: http://webgis.co.humboldt.ca.us/HCEGIS2.0/)

the project area. Based on the timing of the survey, all plant species growing within the study area may not have been observed due to varying flowering phenologies and life forms, such as bulbs, biennials, and annuals. Other potentially dominant species within vegetation communities on site may be present during other times of the year. Therefore, the present study is not floristic in nature. Some of the plant species identified in this report are tentative due to the absence of morphological characters, resulting from immature reproductive structures or seasonal desiccation, which is required to make species-level determinations. Species-specific surveys will be conducted as appropriate and are further discussed below.

Results and Discussion

Vegetation

The project area is generally mesic North Coast Conifer and riparian scrub with clearings dominated by pasture grasses and forbs. The forested areas are dominated by *Pseudotsuga menziesii* (Douglas fir), *Sequoia sempervirens* (coast redwood), *Abies grandis* (grand fir), *Alnus rubra* (red alder), and *Salix* sp. (willow). The forested areas were had a variable canopy and understory but were primarily open with dense shrub layer. Openings are a mixture of native and non-native grasses and forbs including *Geranium molle* (Crane's bill geranium), *Hirshfeldia incana* (mustard), *Avena* sp (wild oats), *Bromus hordeaceus* (soft chess), *Holcus lanatus* (velvet grass), *Claytonia* sp. (claytonia), *Trifolium* sp. (clover *Pteridium aquilinium* var. *pubescens* (western bracken fern), and *Rosa* sp. (rose). Riparian areas varied but were primarily dominated by *Alnus rubra* (red alder), *Acer* sp. (maple) *Salix* sp. (willow), *Prunus* sp. (chokecherry), *Ribes* sp. (gooseberry), *Rubus* sp. (bramble), *Nasturtium officinale* (watercress), and *Prunella vulgaris* (selfheal). Mesic areas between upland and wetland areas contained *Equisetum arvense* (horsetail), *Ranunculus* sp. (buttercup). Due to the coastal nature of the site and aspect, many areas were dominated by facultative hydrophytic species that did not appear to be occupying wetlands (wetland hydrology or other characteristics not observed) See appendix for full list of species observed.

Wetlands and SMA areas

As stated previously, there are watercourses in the area. Facultative hydrophytic vegetation was present throughout the site due to the proximity to the coast and other factors. Many areas were dominated by hydrophytic vegetation that did not appear to be in jurisdictional wetlands (primary and secondary hydrology indicators not observed) and were existing via the phreatic zone near the riparian area. A jurisdictional wetland delineation was not requested or conducted for this assessment. The regulatory background for wetlands in Humboldt County is presented below. The watercourses and buffers were surveyed and mapped by Green Roads Consulting and appeared to be accurate. A wetland delineation and stream channel or setback analysis were not part of the scope of this report

U.S. Army Corps of Engineers (USACE)

The USACE Regulatory Branch regulates activities that may discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "waters of the U.S." where the material (1) replaces any portion of a "waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". These fill materials include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters. The

selection of disposal sites for dredged or fill material is done in accordance with guidelines specified in Section 404(b)(1) of the CWA, which were developed by the U.S. Environmental Protection Agency (USEPA).

Regional Water Quality Control Board (RWQCB)

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.," including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance an activity with the potential for discharge into navigable waters will not violate water quality standards. Water Quality Certification must be based on findings that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives found in each of the nine RWQCBs' Basin Plans.

California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the California Fish and Game Code (§§1600–1616). Activities of state and local agencies, as well as public utilities that are project proponents, are regulated by the CDFW under Section 1602 of the California Fish and Game Code.

Because the CDFW includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland.

However, riparian forests are frequently included within CDFW regulatory jurisdiction under Section 1602 of the California Fish and Game Code.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW extends jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or near a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

Humboldt County-Streamside Management Area

"Streamside Management Areas" (SMAs) [Section 3432(5) of the Humboldt County 1984 General Plan] are defined in the Humboldt County General Plan (Page G-8) and include a natural resource area along both sides of streams containing the channel and adjacent land. Updates to the SMA guidance for cannabis activities are defined in the Environmental Impact Assessment Biological Resources Section[4].

Project applicants proposing development activities within a SMA or wetland areas are required to include a site-specific biological report prepared consistent with these regulations. The written report prepared by a qualified biologist is subsequently referred to CDFW for review and comment. If required, after agency review of the preliminary habitat assessment, protocol level surveys will be completed per recommendations by the Final Environmental Impact Report (FEIR) amendments to the Humboldt County Code Regulating Commercial Cannabis Activities[5].

Additional Laws and Policies

In addition to the above-mentioned policies, numerous other policies exist to protect wetlands, waters and biological resources including the California Environmental Quality Act (CEQA), California Endangered Species Act (CESA) and the Z'berg-Nejedly Forest Practice Act.

Northern Spotted Owl

In 2016, the California Fish and Game Commission approved the listing of the Northern Spotted Owl (*Strix occidentalis caurina*) as Threatened under the California Endangered Species Act. It has been listed as Threatened under the federal Endangered Species Act since 1990. Owl pairs typically nest in broken-top trees, tree cavities, debris accumulations or nests built by other wildlife (abandoned raptor nests or rodent nests). Females generally lay one to two eggs in spring and chicks fledge and leave nests in early fall. Generally older forests with dense canopy closure are preferred for nesting and roosting, however younger stands with similar structure are also utilized. Structural components of high-quality stands include multiple canopy layers, higher species density, larger overstory trees, live trees with deformities and woody debris in the understory. Prey species include flying squirrels, woodrats, rabbits, voles, shrews, gophers, smaller birds, bats and insects. Owls are threatened by Barred Owls, habitat loss, climate change and pathogens.[6]

Northern Spotted Owl was recorded in the CDFW database within 1 mile. Habitat was present on-site for nesting spotted owls due to stand age and structure. The HUM0938 activity center is located approximately 0.59 miles north of the project and positive observations of a nesting pair were made by by Green Diamond and Humboldt Redwood Company up until 2017 in the NSO database. Critical habitat for NSO is not located within five miles of the project area.

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[4] https://humboldtgov.org/DocumentCenter/View/58840/Section-311-Biological-Resources-Revised-DEIRPDF

[5] Final Environmental Impact Report :Amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. January 2018. Prepared by Ascent Environmental. Accessed via https://humboldtgov.org/DocumentCenter/View/62689/Humboldt-County-Cannabis-Program-Final-EIR60mb-PDF. Accessed [January 2019]

[6] Northern Spotted Owls in California. California Department of Fish and Wildlife (Accessed via https://www.wildlife.ca.gov/Conservation/Birds/Northern-Spotted-Owl

CNDDB and other Database Results

The CDFW CNDDB, BIOS, Rarefind and CNPS databases were scoped before and after field site visit to determine habitat potential and known occurrences of rare or listed species of concern in or around the project area. Known reference populations near the site were visited to confirm phenology. The following species were observed in the database within 1 miles of the project site.

Clarkia amoena ssp. *Whitneyi* (Whitney's farwell-to-spring) is eligible for state listing being rated 1B.1 by CNPS. It occupies coastal bluff scrub and coastal scrub in elevations of 5-125m m.

Oncorhynchus clarkii clarkii (coast cutthroat trout) are found in small, low gradient coastal streams and estuaries from the Eel River to the Oregon border. This species needs shaded streams with water temperatures less than 18C, and small gravel present for spawning.

Bombus occidentalis (western bumble bee) while once common & widespread, the species has declined precipitously from central CA to southern B.C., perhaps from disease.

Fissidens pauperculus (minute pocket moss) has a CNPS ranking of 1B.2, meaning they are rare throughout their range. It occupies north coast coniferous forest growing on damp soil along the coast. It can be found in dry streambeds or on streambanks at 10-1024 m in elevation.

Calamagrostis bolanderi (CNPS 4.2) (Bolander's reed grass) was present in specimens collected on site. it was not identified in the 9-quad scoping. The species was most likely growing sporadically in mesic, open areas. As the species was not positively identified during the site visit, information to complete a CNDDB form was not obtained, however a CNDDB form with general information will be submitted and is attached to this document.

The project area contains habitat for various rare or listed species. (See site photos for general habitat types) A complete list of occurrences of rare and species of concern are listed below in Table 1 and Table 2.

Potential Direct and Indirect Impacts

The potential direct, indirect, and cumulative effects of the land clearing, residential development, and cultivation activities include removal of vegetation and canopy cover, disturbance and compaction of soil, alteration of hydrologic regime, sedimentation and erosion, increase in invasive species, and noise, solid and chemical waste pollution, visual impacts, and air quality impacts.

Tree clearing is not currently proposed, nor is additional grading or expansion of facilities. The ambient conditions from cannabis cultivation are similar to the impacts of historic logging/grazing. The site was well maintained, and solid waste or other hazardous materials were not observed. Generators or other tools creating noise and/or light pollution were not observed. Two recreational vehicles were located onsite as well as various storage structures, however none were being utilized during the visit.

Agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species if additional activities are proposed that may result in take of a

listed species including Northern Spotted Owl..[7] If required, pre-construction reconnaissance surveys should follow the guidelines set forth in the Humboldt County Cannabis Program EIR, CDFW Survey and Monitoring Protocols and Guidelines[8], USFWS Endangered Species Program[9] and CNPS Botanical Survey Guidelines.[10]

Recommendations

Follow all recommendations outlined by existing agency policies for minimizing impacts to natural resources. Impacts from light, noise and chemicals can be addressed in the operations plan and best management practices can be employed to minimize impacts. Additional disturbance, clearing, and road cuts would likely modify existing groundwater, and surface water patterns and could impact water quality and/or hydrophytic species.

Please contact me with any comments or concerns regarding this memorandum or future work required for your project. I can be reached at tami@trans-terra.com or (707) 845-7483. I have included my project experience as an attachment to this memorandum as it is often requested by agency personnel reviewing work of this nature. (Appendix A)

[7] Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelet in Northwestern California: (Accessed via https://www.fws.gov/arcata/es/birds/nso/documents/MAMUNSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf)

[8] California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines (Accessed via https://www.wildlife.ca.gov/conservation/survey-protocols)

[9] USFWS Arcata Fish and Wildlife Office Endangered Species Program (Accessed via https://www.fws.gov/arcata/es/default.htm)

[10] California Native Plant Society (CNPS) Botanical Survey Guidelines (Accessed via https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf)

Site Photographs

Various mesic areas including compacted landings/roads, seep/streams, forested depressions and openings. The majority of the site had a fairly closed canopy and/or filtered light with the exception of openings for cultivation and roads.

Drone photographs (above) provided by Norman Kroon.

Mesic openings in forested areas with moderate to dense understory.

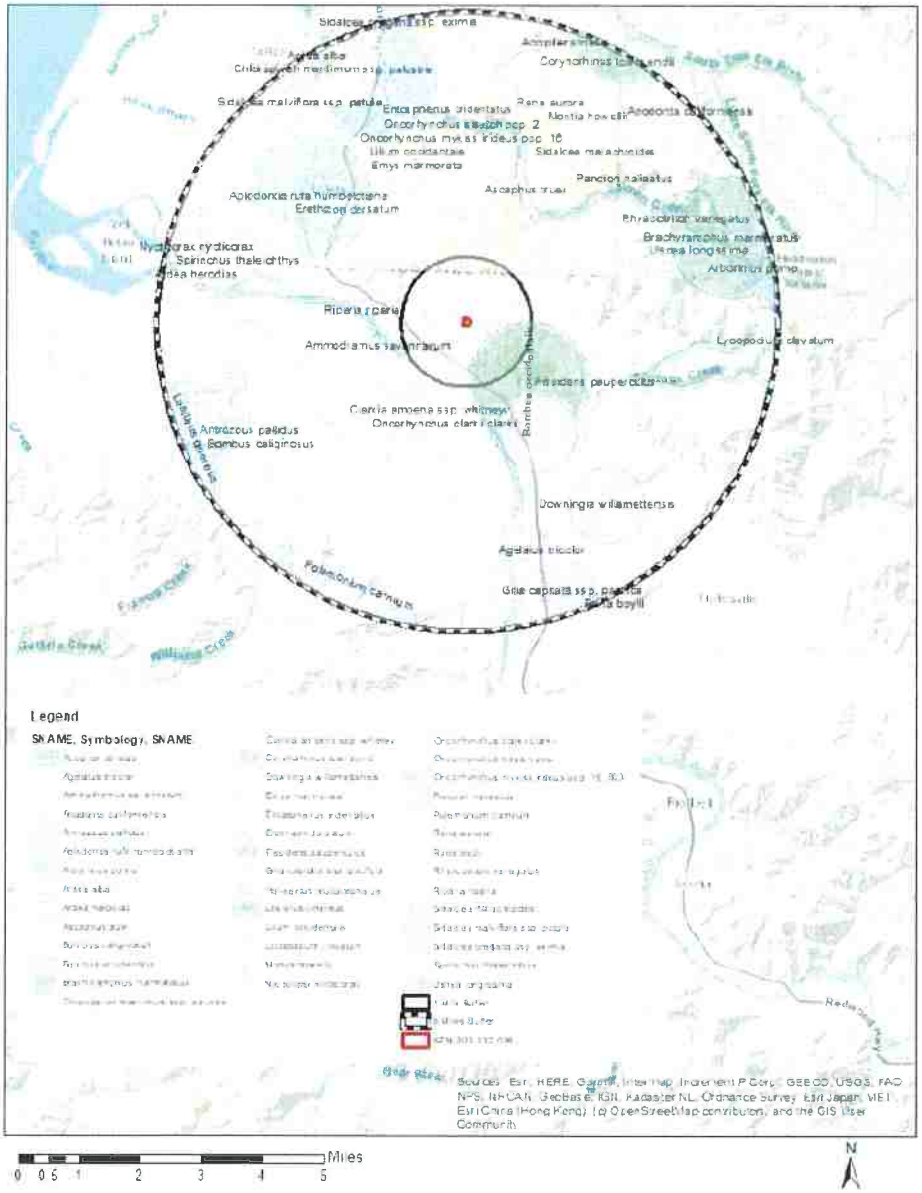


Figure 4 – CNDDB search results of observed rare plant and sensitive animal occurrences within five miles of property.

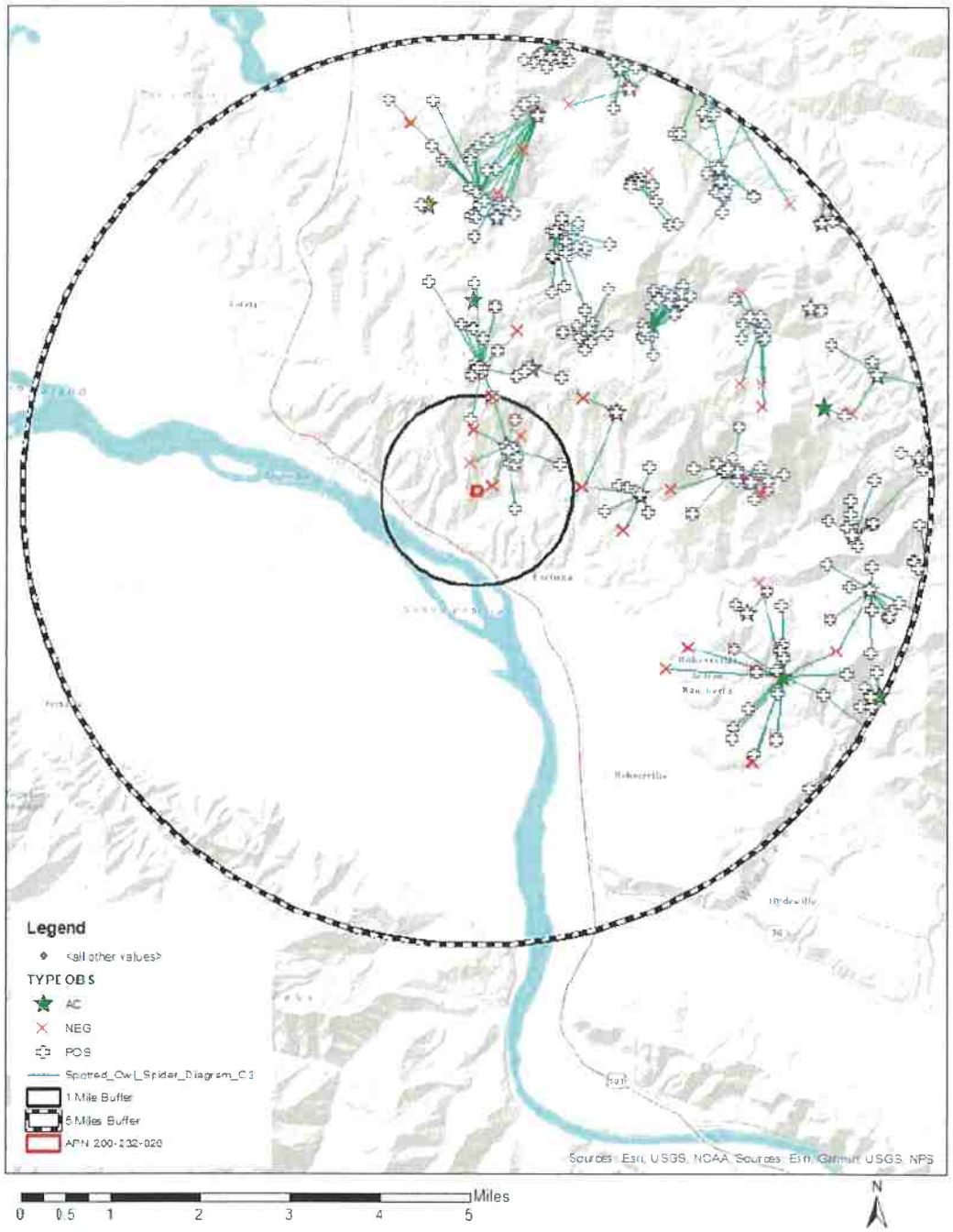


Figure 5. Northern Spotted Owls database entries within 5 miles of property

Table 1-CNDDB nine-quad database results for the Fortuna 7.5' quadrangle (plants listed in CNPS results; C=Candidate Species, E=Endangered, T=Threatened, D=Delisted, N=None).

Scientific Name	Common Name	FESA	CESA	General Habitat	Microhabitat
Accipiter cooperii	Cooper's hawk	N	N	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.
Accipiter striatus	sharp-shinned hawk	N	N	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas.	North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.
Acipenser medirostris	green sturgeon	T	N	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, & Trinity Rivers.	Spawns at temps between 8-14 C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.
Agelaius tricolor	tricolored blackbird	N	C E	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
Ammodramus savannarum	grasshopper sparrow	N	N	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.
Anodonta californiensis	California floater	N	N	Freshwater lakes and slow-moving streams and rivers. Taxonomy under review by specialists.	Generally in shallow water.
Antrozous pallidus	pallid bat	N	N	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
Aplodontia rufa humboldtiana	Humboldt mountain beaver	N	N	Coast Range in southwestern Del Norte County and northwestern Humboldt County.	Variety of coastal habitats, including coastal scrub, riparian forests, typically with open canopy and thickly vegetated understory.
Aquila chrysaetos	golden eagle	N	N	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Arborimus pomo	Sonoma tree vole	N	N	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood & montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionaly take needles of grand fir, hemlock or spruce.

Scientific Name	Common Name	FESA	CESA	General Habitat	Microhabitat
Ardea alba	great egret	N	N	Colonial nester in large trees.	Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.
Ardea herodias	great blue heron	N	N	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.
Ascaphus truei	Pacific tailed frog	N	N	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.
Bombus caliginosus	obscure bumble bee	N	N	Coastal areas from Santa Barbara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.
Bombus occidentalis	western bumble bee	N	N	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	
Brachyramphus marmoratus	marbled murrelet	T	E	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz.	Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.
Charadrius alexandrinus nivosus	western snowy plover	T	N	Sandy beaches, salt pond levees & shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.
Charadrius montanus	mountain plover	N	N	Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms.	Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.
Coastal Terrace Prairie	Coastal Terrace Prairie	N	N		
Coccyzus americanus occidentalis	western yellow-billed cuckoo	T	E	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.
Corynorhinus townsendii	Townsend's big-eared bat	N	N	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Coturnicops noveboracensis	yellow rail	N	N	Summer resident in eastern Sierra Nevada in Mono County.	Freshwater marshlands.
Egretta thula	snowy egret	N	N	Colonial nester, with nest sites situated in protected beds of dense tules.	Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.
Emys marmorata	western pond turtle	N	N	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.

Scientific Name	Common Name	FESA	CESA	General Habitat	Microhabitat
Entosphenus tridentatus	Pacific lamprey	N	N	Found in Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River. Size of runs is declining.	Swift-current gravel-bottomed areas for spawning with water temps between 12-18 C. Ammocoetes need soft sand or mud.
Erethizon dorsatum	North American porcupine	N	N	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.
Eucyclogobius newberryi	tidewater goby	E	N	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.
Haliaeetus leucocephalus	bald eagle	D	E	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
Lasiurus cinereus	hoary bat	N	N	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Margaritifera falcata	western pearlshell	N	N	Aquatic.	Prefers lower velocity waters.
Martes caurina humboldtensis	Humboldt marten	N	C E	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County.	Associated with late-successional coniferous forests, prefer forests with low, overhead cover.
Myotis yumanensis	Yuma myotis	N	N	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	N	N		
Nycticorax nycticorax	black-crowned night heron	N	N	Colonial nester, usually in trees, occasionally in tule patches.	Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.
Oncorhynchus clarkii clarkii	coast cutthroat trout	N	N	Small coastal streams from the Eel River to the Oregon border.	Small, low gradient coastal streams and estuaries. Needs shaded streams with water temperatures <18C, and small gravel for spawning.
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	T	T	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California.	State listing refers to populations between the Oregon border and Punta Gorda, California.

Scientific Name	Common Name	FESA	CESA	General Habitat	Microhabitat
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	T	N	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	
Pandion haliaetus	osprey	N	N	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Pekania pennanti	fisher - West Coast DPS	N	T	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.
Rana aurora	northern red-legged frog	N	N	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover.	Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.
Rana boylii	foothill yellow-legged frog	N	CT	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
Rhyacotriton variegatus	southern torrent salamander	N	N	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest.	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.
Riparia riparia	bank swallow	N	T	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
Sitka Spruce Forest	Sitka Spruce Forest	N	N		
Spirinchus thaleichthys	longfin smelt	C	T	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column.	Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.
Thaleichthys pacificus	eulachon	T	N	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries.	Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.

Table 2-CNPS nine-quad database results for the Fortuna 7.5' quadrangle

Scientific Name	Common Name	Lifeform	CR PR	Habitat
Abronia umbellata var. breviflora	pink sand-verbena	perennial herb	1B.1	Coastal dunes
Angelica lucida	sea-watch	perennial herb	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)
Anomobryum julaceum	slender silver moss	moss	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	perennial herb	1B.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)
Carex leptalea	bristle-stalked sedge	perennial rhizomatous herb	2B.2	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps
Carex lyngbyei	Lyngbye's sedge	perennial rhizomatous herb	2B.2	Marshes and swamps (brackish or freshwater)
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	annual herb (hemiparasitic)	1B.2	Marshes and swamps (coastal salt)
Castilleja litoralis	Oregon coast paintbrush	perennial herb (hemiparasitic)	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	annual herb (hemiparasitic)	1B.2	Marshes and swamps (coastal salt)
Chrysosplenium glechomifolium	Pacific golden saxifrage	perennial herb	4.3	North Coast coniferous forest, Riparian forest
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	annual herb	1B.1	Coastal bluff scrub, Coastal scrub
Collomia tracyi	Tracy's collomia	annual herb	4.3	Broadleafed upland forest, Lower montane coniferous forest
Downingia willamettensis	Cascade downingia	annual herb	2B.2	Cismontane woodland (lake margins), Valley and foothill grassland (lake margins), Vernal pools
Erysimum menziesii	Menzies? wallflower	perennial herb	1B.1	Coastal dunes
Erythronium oregonum	giant fawn lily	perennial bulbiferous herb	2B.2	Cismontane woodland, Meadows and seeps
Erythronium revolutum	coast fawn lily	perennial bulbiferous herb	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest
Fissidens pauperculus	minute pocket moss	moss	1B.2	North Coast coniferous forest (damp coastal soil)
Gilia capitata ssp. pacifica	Pacific gilia	annual herb	1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland
Gilia millefoliata	dark-eyed gilia	annual herb	1B.2	Coastal dunes
Glehnia littoralis ssp. leiocarpa	American glehnia	perennial herb	4.2	Coastal dunes
Hesperevax sparsiflora var. brevifolia	short-leaved evax	annual herb	1B.2	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie

Scientific Name	Common Name	Lifeform	CR PR	Habitat
Hesperolinon adenophyllum	glandular western flax	annual herb	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland
Lathyrus glandulosus	sticky pea	perennial rhizomatous herb	4.3	Cismontane woodland
Layia carnosa	beach layia	annual herb	1B.1	Coastal dunes, Coastal scrub (sandy)
Lilium kelloggii	Kellogg's lily	perennial bulbiferous herb	4.3	Lower montane coniferous forest, North Coast coniferous forest
Lilium occidentale	western lily	perennial bulbiferous herb	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)
Lilium rubescens	redwood lily	perennial bulbiferous herb	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest
Listera cordata	heart-leaved twayblade	perennial herb	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest
Lycopodium clavatum	running-pine	perennial rhizomatous herb	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)
Mitellastra caulescens	leafy-stemmed mitrewort	perennial rhizomatous herb	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest
Montia howellii	Howell's montia	annual herb	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools
Oenothera wolfii	Wolf's evening-primrose	perennial herb	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest
Packera bolanderi var. bolanderi	seacoast ragwort	perennial rhizomatous herb	2B.2	Coastal scrub, North Coast coniferous forest
Piperia candida	white-flowered rein orchid	perennial herb	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest
Pityopus californicus	California pinefoot	perennial herb (achlorophyllous)	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest
Pleuropogon refractus	nodding semaphore grass	perennial rhizomatous herb	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest
Polemonium carneum	Oregon polemonium	perennial herb	2B.2	Coastal prairie, Coastal scrub, Lower montane coniferous forest
Puccinellia pumila	dwarf alkali grass	perennial herb	2B.2	Marshes and swamps (coastal salt)
Ribes laxiflorum	trailing black currant	perennial deciduous shrub	4.3	North Coast coniferous forest

Scientific Name	Common Name	Lifeform	CR PR	Habitat
Ribes roezlii var. amictum	hoary gooseberry	perennial deciduous shrub	4.3	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
Sidalcea malachroides	maple-leaved checkerbloom	perennial herb	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	perennial rhizomatous herb	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest
Sidalcea oregana ssp. eximia	coast checkerbloom	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest
Sisyrinchium hitchcockii	Hitchcock's blue-eyed grass	perennial rhizomatous herb	1B.1	Cismontane woodland (openings), Valley and foothill grassland
Spergularia canadensis var. occidentalis	western sand-spurrey	annual herb	2B.1	Marshes and swamps (coastal salt)
Tiarella trifoliata var. trifoliata	trifoliate laceflower	perennial rhizomatous herb	3.2	Lower montane coniferous forest, North Coast coniferous forest
Usnea longissima	Methuselah's beard lichen	fruticose lichen (epiphytic)	4.2	Broadleafed upland forest, North Coast coniferous forest

APPENDIX AB-Plant Species Observed

S. Name Jepson 93	S. Name Jepson 12	Common Name	CRP Rank
Herb Layer			
Achillea millefolium	*Achillea millefolium*	Common yarrow	
Adenocaulon bicolor	*Adenocaulon bicolor*	Trail plant	
Agrostis capillaris	*Agrostis capillaris*	Colonial bent	
Asarum caudatum	*Asarum caudatum*	Longtail wild ginger	
Athyrium filix-femina var. *cyclosorum*	*Athyrium filix-femina* var. *cyclosorum*	Lady fern	
Briza maxima	*Briza maxima*	Rattlesnake grass	
Bromus hordeaceus	*Bromus hordeaceus*	Soft chess	
Bromus vulgaris	*Bromus vulgaris*	Columbia brome	
Calamagrostis bolanderi	***Calamagrostis bolanderi***	**Bolander's reed grass**	
Cardamine oligosperma	*Cardamine oligosperma*	Western bittercress	4.2
Carex deweyana subsp. *leptopoda*	*Carex leptopoda*	Slender-footed sedge	
Cirsium sp.	*Cirsium* sp.	Thistle	
Claytonia perfoliata	*Claytonia perfoliata*	Miner's lettuce	
Claytonia sibirica	*Claytonia sibirica*	Candy flower	
Conium maculatum	*Conium maculatum*	Poison hemlock	
Cortaderia jubata	*Cortaderia jubata*	Purple pampas grass	
Daucus pusillus	*Daucus pusillus*	Wild carrot	
Epilobium ciliatum	*Epilobium ciliatum*	Northern willow herb	
Equisetum arvense	*Equisetum arvense*	Common horsetail	
Equisetum telmateia subsp. *braunii*	*Equisetum telmateia* subsp. *braunii*	Giant horsetail	
Festuca arundinacea	*Festuca arundinacea*	Tall fescue	
Festuca californica	*Festuca californica*	California fescue	
Fragaria vesca	*Fragaria vesca*	Wood strawberry	
Galium aparine	*Galium aparine*	Goose grass	
Galium parisiense	*Galium parisiense*	Wall bedstraw	
Geranium dissectum	*Geranium dissectum*	Cut-leaved geranium	
Geranium molle	*Geranium molle*	Dovefoot geranium	
Hedera helix	*Hedera helix*	English ivy	
Heuchera micrantha	*Heuchera micrantha*	Small-flowered alumroot	
Hirschfeldia incana	*Hirschfeldia incana*	Mediterranean mustard	
Holcus lanatus	*Holcus lanatus*	Common velvet grass	
Hordeum brachyantherum	*Hordeum brachyantherum*	Meadow barley	
Hydrophyllum tenuipes	*Hydrophyllum tenuipes*	Pacific waterleaf	
Juncus bufonius	*Juncus bufonius*	Toad rush	
Juncus effusus	*Juncus effusus*	Soft or lamp rush	
Juncus patens	*Juncus patens*	Spreading rush	
Leucanthemum vulgare	*Leucanthemum vulgare*	Ox-eye daisy	
Lolium multiflorum	*Festuca perennis*	Italian rye grass	
Lotus corniculatus	*Lotus corniculatus*	Bird's-foot treefoil	
Lotus micranthus	*Acmispon parviflorus*	Small-flowered lotus	
Marah fabaceus	*Marah fabacea*	California man-root	
Mentha pulegium	*Mentha pulegium*	Pennyroyal	
Myosotis discolor	*Myosotis discolor*	Changing forget-me-not	

S. Name Jepson 93	S. Name Jepson 12	Common Name	CRP Rank
Nemophila parviflora	*Nemophila parviflora*	Small-flowered nemophila	
Osmorhiza chilensis	*Osmorhiza berteroi*	Sweet-cicely	
Oxalis oregana	*Oxalis oregana*	Redwood sorrel	
Petasites frigidus	*Petasites frigidus*	Western sweet coltsfoot	
Plantago lanceolata	*Plantago lanceolata*	English plantain	
Plantago major	*Plantago major*	Common plantain	
Polypogon monspeliensis	*Polypogon monspeliensis*	Annual beard grass	
Polystichum munitum	*Polystichum munitum*	Western sword fern	
Ranunculus repens	*Ranunculus repens*	Creeping buttercup	
Raphanus sativus	*Raphanus sativus*	Wild radish	
Rubus ursinus	*Rubus ursinus*	California blackberry	
Rumex acetosella	*Rumex acetosella*	Sheep sorrel	
Rumex crispus	*Rumex crispus*	Curly dock	
Sagina apetala	*Sagina apetala*	Sticky pearlwort	
Sanicula crassicaulis	*Sanicula crassicaulis*	Pacific snakeroot	
Satureja douglasii	*Clinopodium douglasii*	Yerba buena	
Scirpus microcarpus	*Scirpus microcarpus*	Small fruited bulrush	
Scrophularia californica subsp. *californica*	*Scrophularia californica*	California figwort	
Sonchus sp.	*Sonchus* sp.	Sow thistle	
Stachys ajugoides var. *rigida*	*Stachys rigida* var. *rigida*	Rough hedge-nettle	
Stachys chamissonis	*Stachys chamissonis*	Coast hedge-nettle	
Stellaria crispa	*Stellaria crispa*	Crisp starwort	
Taraxacum officinale	*Taraxacum officinale*	Common dandelion	
Tellima grandiflora	*Tellima grandiflora*	Fringe cups	
Tolmiea menziesii	*Tolmiea diplomenziesii*	Pig-a-back plant	
Trifolium dubium	*Trifolium dubium*	Little hop clover	
Trifolium repens	*Trifolium repens*	White clover	
Trillium ovatum	*Trillium ovatum*	Western trillium	
Urtica dioica subsp. *gracilis*	*Urtica dioica* subsp. *gracilis*	American stinging nettle	
Vancouveria hexandra	*Vancouveria hexandra*	Northern inside-out flower	
Veronica americana	*Veronica americana*	American brooklime	
Veronica persica	*Veronica persica*	Persian speedwell	
Vicia gigantea	*Vicia gigantea*	Giant vetch	
Vicia hirsuta	*Vicia hirsuta*	Hairy vetch	
Vicia tetrasperma	*Vicia tetrasperma*	Sparrow vetch	
Viola glabella	*Viola glabella*	Sream violet or smooth yellow violet	
Viola sempervirens	*Viola sempervirens*	Evergreen violet	
Vulpia microstachys var. *pauciflora*	*Festuca microstachys*	Small fescue	
Shrub Layer			
Acer circinatum	*Acer circinatum*	Vine maple	
Alnus rubra	*Alnus rubra*	Red alder	
Baccharis pilularis	*Baccharis pilularis*	Coyote brush	
Ceanothus thyrsiflorus	*Ceanothus thyrsiflorus*	Blue blossom	
Cotoneaster sp.	*Cotoneaster* sp.	Cotoneaster	
Cytisus scoparius	*Cytisus scoparius*	Scotch broom	
Euonymus occidentalis	*Euonymus occidentalis*	Western burning bush	
Holodiscus discolor	*Holodiscus discolor*	Oceanspray	
Lonicera hispidula	*Lonicera hispidula*	Pink honeysuckle	

S. Name Jepson 93	S. Name Jepson 12	Common Name	CRP Rank
Lonicera involucrata var. *involucrata*	*Lonicera involucrata* var. *involucrata*	Twinberry	
Oemleria cerasiformis	*Oemleria cerasiformis*	Oso berry	
Prunus emarginata	*Prunus emarginata*	Bitter cherry	
Rhamnus purshiana	*Frangula purshiana*	Cascara	
Ribes sanguineum var. *sanguineum*	*Ribes sanguineum* var. *sanguineum*	Red-flowering currant	
Rosa gymnocarpa var. *serpentina*	*Rosa gymnocarpa* var. *serpentina*	Gasquet rose	
Rubus discolor	*Rubus armeniacus*	Himalayan blackberry	
Rubus leucodermis	*Rubus leucodermis*	Whitebark raspberry	
Rubus parviflorus	*Rubus parviflorus*	Thimbleberry	
Rubus spectabilis	*Rubus spectabilis*	Salmonberry	
Rubus ursinus	*Rubus ursinus*	California blackberry	
Sambucus racemosa var. *microbotrys*	*Sambucus racemosa* var. *racemosa*	Red elderberry	
Toxicodendron diversilobum	*Toxicodendron diversilobum*	Poison-oak	
Vaccinium ovatum	*Vaccinium ovatum*	California huckleberry	
Vaccinium parvifolium	*Vaccinium parvifolium*	Red huckleberry	
Tree Layer			
Acer macrophyllum	*Acer macrophyllum*	Bigleaf maple	
Alnus rubra	*Alnus rubra*	Red alder	
Ilex aquifolium	*Ilex aquifolium*	English holly	
Picea sitchensis	*Picea sitchensis*	Sitka spruce	
Prunus virginiana var. *demissa*	*Prunus virginiana* var. *demissa*	Western choke cherry	
Pseudotsuga menziesii var. *menziesii*	*Pseudotsuga menziesii* var. *menziesii*	Douglas-fir	
Quercus kelloggii	*Quercus kelloggii*	California black oak	
Salix lucida subsp. *lasiandra*	*Salix lasiandra* var. *lasiandra*	Pacific willow	
Salix sp.	*Salix* sp.	Willow	
Sequoia sempervirens	*Sequoia sempervirens*	Coast redwood	

APPENDIX B-QUALIFICATIONS

Tami Camper
Owner-Founder

Tami is the founder of TransTerra Consulting LLC. She obtained a B.S. in Environmental Science from Western Washington University and M.S. in Biology from Humboldt State University. She has worked on publications including a rare plant guide for timberlands of Mendocino County published by MCRCD. She has worked as a professional biologist and planner for 18 years specializing in wetland/stream surveys, wildlife/vegetation mapping, rare species surveys, biological assessments, impact assessments, mitigation and monitoring plans, CEQA/NEPA and land-use planning. Though she has worked as an independent consultant for most of her career, she has also worked for HSU, Caltrans, Mendocino Redwood Company, Campbell Timberland Management and Streamline Planning (now SHN) to round out her experience. Her desire is to implement her diverse background and passion for the natural world to aid clients through the environmental process. She also is also a member of the Arcata Sunrise Rotary Club, California Native Plant Society, The Wildlife Society, The Society of Wetland Scientists and other local non-profits and professional organizations.

Margaux Karp
Staff Biologist

Margaux received her Bachelor's Degree in Molecular Biology from the California State University of Monterey Bay in 2018. She grew up in Humboldt and is very familiar with the unique geological and political landscape. Her experience encompasses restoration, environmental education, and lab techniques. She strives to utilize her molecular background to share an in-depth understanding of the environmental field to promote policy and preservation.

Adrian Macedo
Staff Biologist

Adrian obtained a Bachelors of Science degree in Wildlife and a minor in Botany from Humboldt State University in 2017. He is currently finishing up a Masters of Science in Biological Sciences at Humboldt State. He has worked with the California Department of Fish and Wildlife for the past 5 years specializing in fish, amphibian, and reptile research and restoration in the high mountain lakes of the Trinity Alps and Marble Mountain wilderness. His extensive resume includes his current phylogenetic work on Coastal Trailed Frog (Ascaphus truei), Mountain Lion (Puma concolor) tracking, bat mist-netting, electrofishing/dive counts, research specimen preparation, PIT tagging of amphibians, invasive species removal, native plant cultivation and landscaping, and much more. In addition, he has worked on six publications in various journals and three conference presentations.

Megan Nibbelink
Staff Botanist

Megan received her Bachelor's degree in Botany from Humboldt State University in 2019. She will be returning to HSU to pursue her Master's degree in Biology with a thesis focusing on fossil plants from the lower Devonian of Québec, Canada. Her previous work experience includes curation and care of an extensive living collection of plants from around the world, state-of-the-art biological lab facility and research equipment maintenance, and education. Currently, she is working on a diversity survey of ancient plants and will be presenting an oral paper at the Botanical Society of America conference this summer.

Roads

There will be a minimal increase of road use from processing on-site. As cultivation is cyclical, processing will occur throughout the course of the year where the flower will be trimmed and cured on site with the requested permit. This will require temporary intermittent services from a third party, combined with the owners and trimming equipment. When trimming professionals are supplied through a third party, one vehicle will be used to access the main road (Palmer Blvd) and the private road leading to the property for product transportation.

Whitchurch has provided a road evaluation for Palmer Blvd as detailed in the next section. There is a 500-foot alley that leads from Palmer Blvd to the ESG property boundary shared with one neighbor. The neighbor's property is currently vacant.

The road will undergo a transformation from its current state. A sewer and water line will be laid this fall and, early in the new year a communications conduit will be brought to the property laid in a separate ditch. Equipment will be used in this process where the road will be widened slightly ensuring a proper width and drainage on both sides of the road. Crushed gravel will be added as a top layer.

At the entrance of the property will be the required hammer head. This will be graded and topped with crushed gravel.

Prior to the start of the cannabis operations, an asphalt apron will be completed where the alley meets Palmer Blvd. This is a requirement for Ord 1.0.

Road Evaluation Report – Whitchurch Engineering

HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS
ROAD EVALUATION REPORT

PART A: *Part A may be completed by the applicant*

Applicant Name: Norman Kroon APN: 200-232-026

Planning & Building Department Case/File No.:

Road Name: Palmer Boulevard *(complete a separate form for each road)*

From Road (Cross street): Sequoia Drive/Hansen Road

To Road (Cross street): APN: 200-232-026

Length of road segment: ± 3,000 feet miles Date Inspected 7/18/2018

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 8-2-18
Date

JEFFREY LAHLAM
Name Printed

PART B: Only complete Part B if Box 3 is checked in Part A. *Part B is to be completed by a Civil Engineer licensed by the State of California. Complete a separate form for each road*

Road Name: Palmer Boulevard Date Inspected: 7/18/2018 APN: 200-232-026

From Road: Sequoia Drive/Hansen Road (PM N/A)

To Road: APN: 200-232-026 (PM N/A)

Planning & Building Department Case/File No.:

1. What is the Average Daily Traffic of the road?

   ADT: 230 Date(s) measured: 7/18/2018

   Method used to measure ADT: ☒ Counters ☐ Estimated using ITE *Trip Generation* Book

   Is the ADT of the road less than 400? ☒ Yes ☐ No

   If **YES**, then the road is considered very low volume and shall comply with the design standards outlined in the American Association of State Highway and Transportation Officials (AASHTO) *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400)*. *Complete sections 2 and 3 below.*

   If **NO**, then the road shall be reviewed per the applicable policies for the design of local roads and streets presented in AASHTO policy on Geometric Design of Highways and Streets, commonly known as the Green Book. Complete section 3 below.

2. Identify site specific safety problems with the road that include, but are not limited to. (Refer to Chapter 3 in AASHTO *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400)* for guidance.)

   A. Pattern of curve related crashes.
   Check one: ☒ No. ☐ Yes, see attached sheet for PM locations.

   B. Physical evidence of curve problems such as skid marks, scarred trees, or scarred utility poles.
   Check one: ☒ No. ☐ Yes, see attached sheet for PM locations.

   C. Substantial edge rutting or encroachment.
   Check one: ☒ No. ☐ Yes, see attached sheet for PM locations.

   D. History of complaints from residents or law enforcement.
   Check one: ☐ No. ☒ Yes ☒ (check if written documentation is attached)

   E. Measured or known speed substantially higher than the design speed of the road (20+ MPH higher)
   Check one: ☒ No. ☐ Yes.

   F. Need for turn-outs.
   Check one: ☐ No. ☒ Yes, see attached sheet for PM locations.

3. Conclusions/Recommendations per AASHTO. Check one:

   ☒ The roadway can accommodate increased traffic from the proposed use.

   ☐ The roadway can accommodate increased traffic from the proposed use if the recommendations on the attached report are done. ☐ (check if a *Neighborhood Traffic Management Plan* is also required and is attached.)

   ☐ The roadway cannot accommodate increased traffic from the proposed use. It is not possible to address increased traffic.

A map showing the location and limits of the road being evaluated in PART B is attached. The statements in PART B are true and correct and have been made by me after personally evaluating the road.

Signature of civil engineer

8-2-18
Date

REGISTERED PROFESSIONAL ENGINEER
JEFFREY T. LARKAM
No. 68586
CIVIL
STATE OF CALIFORNIA

WHITCHURCH ENGINEERING

610 9th Street
Fortuna, CA 95540
Phone: (707) 725-6926

August 2, 2018

ATTN: Norman Kroon
22311 N. Lake Village Drive
Katy, Tx 77450

RE: Road Evaluation Report
Palmer Blvd. for parcel APN 200-232-026
Intersection of Palmer Blvd. and Palmer Creek Road
to 3000 feet north east of the intersection
Fortuna, CA 95540
APN: 200-232-026

JN: KRO1801

Dear Mr. Kroon,

Per your request on July 18, 2018, a representative of Whitchurch Engineering (WEI) visited Palmer Boulevard with the purpose of performing a Road Evaluation Report per Humboldt County Department of Public Works. The intent of the report is to identify any deficiencies in the subject road section and determine if the road requires improvements to accommodate the traffic loading anticipated from development of the subject parcel. Listed below are the notes from the site visit.

Notes on Site Observation, July 18th, 2018

- The section of road serves 55 parcels
    - 40 parcels are residential low density, 7 parcels are residential estates, 4 parcels are agriculture general, and 3 parcels are timber production zones
    - Road length of section evaluated is ±3,000 feet
- Observed and average of 13 cars leaving and 15 cars entering every hour during peak hours (7-9AM and 4-6PM)
- Surface slopes ranged from 0% -3%

www.whitchurchengineering.com
610 9th St. Fortuna, CA 95540
Phone: (707) 725-6926

- The road is paved with widths 22 feet max to 12 feet min with an average 1.5 feet compacted gravel shoulder on both sides of the road (see attachment 1 for map of road with section widths)
    - Turnout located within 1,300 feet from the intersection of Palmer Creek Road and Palmer Blvd.
    - Turnout measured at 11x 100 feet (see attachment 2 pics 1-4).

County Information

Information was provided on July 19, 2018 by Humboldt County Public Works Department regarding the history of complaints made regarding conditions on Palmer Boulevard (see attachment 3). A total of four complaints were made and all complaints had been resolved prior to the creation of this road evaluation. None of the complaints were traffic related issues on Palmer Boulevard.

On August 1st, the Humboldt County Building and Planning Department released information on the existing cannabis operation on Palmer Boulevard (APN 200-243-037, Application #12655). This operation planned on employing 5-6 employees in 2018. If each employee made 2 trips to the operation in a day then the ADT would increase by 24. This does not significantly change the ADT and therefore does not had an impact on the ADT.

Trip Generation

Based on a site observation conducted by a WEI representative on July 18th, 2018, the number of vehicles using this section of road was an average of 28 trips within each peak hour. For the Commercial Cannabis parcels, traffic volume estimates were based on information provided by our client Norman Kroon as 4-5 trips per year due to the transportation of their product. All operators currently reside on the property thus there will be no changes in ADT due to the employees of the operation. To be conservative 4 ADT was used for each parcel using this section of the road. Extrapolating the observed vehicle traffic for 24 hours equals out to 224 ADT. To be further conservative, we used the K30 method which estimated the ADT at 233. Therefore, the volume of traffic is approximated at 230 ADT which is less than 400 ADT required for a Road Category 4 standard (attachment 2).

Conclusion

The existing road section (Palmer Blvd, from Palmer Creek Road to the parcel 200-232-026) has been evaluated to the Humboldt County Road Design standards. The roadway section evaluated provides access to more than 50 parcels; the road surface is constructed of asphaltic concrete and has a minimum width of 12 feet and maximum width of 22 feet. Per the Humboldt County Road Design

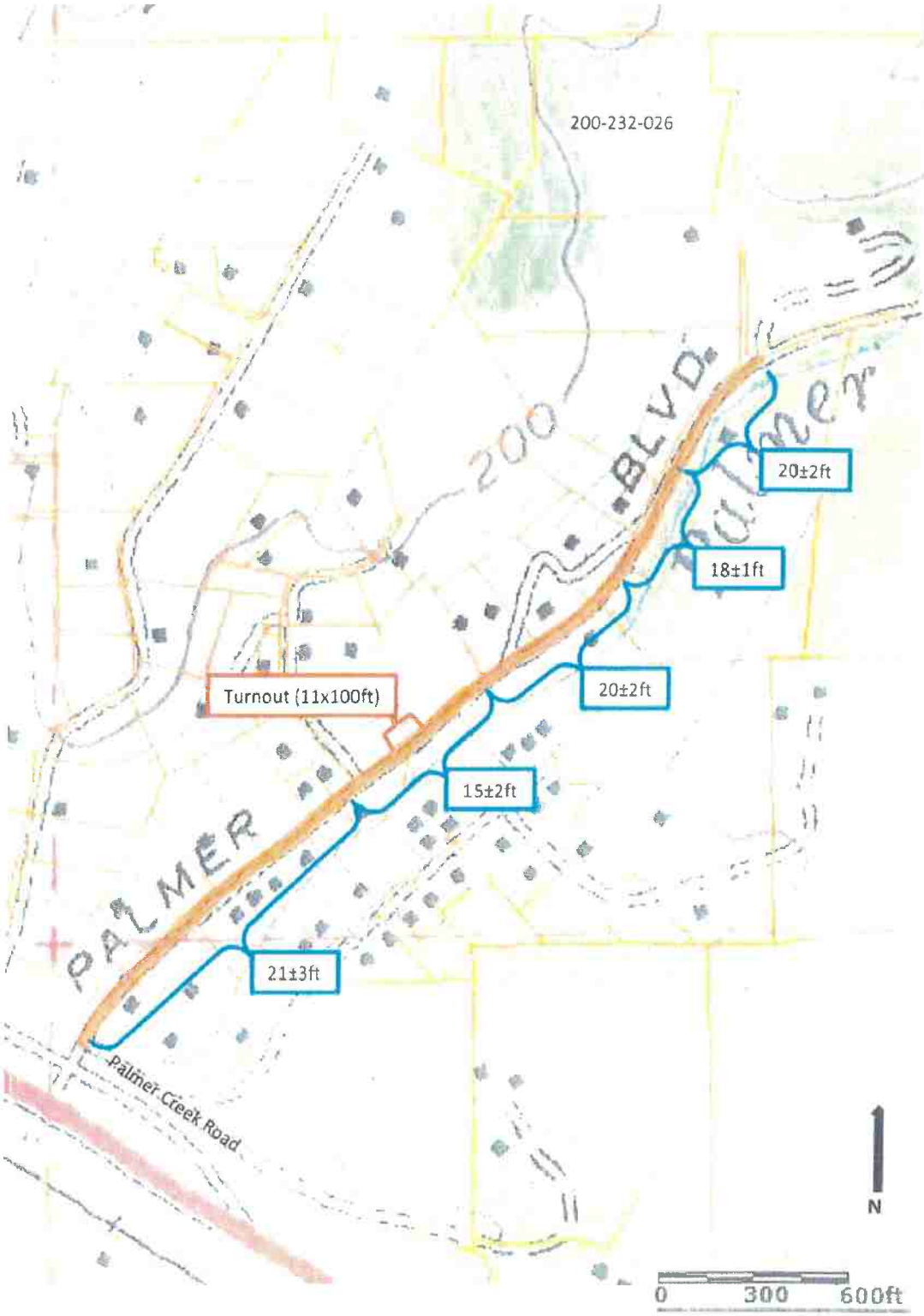
Standards this section of road meets Road Category #4, two lane, narrow travelled way with intervisible turnouts. (See attached: Humboldt County Road Category Ordinance and SRA Fire Regulation Checklist for the road standard) attachment #3. Per the Humboldt County Department of Public Works Road Evaluation Report checklist, this Section of road can accommodate the minimal cumulative increased traffic from this project and all know cannabis projects identified.

Based on visual observation to the best of my knowledge the work performed on this are in accordance with generally accepted procedures. However, Whitchurch Engineering, Inc. does not undertake the guarantee of construction, nor do we relieve the contractor of his primary responsibility to produce a completed project conforming to the project plans and specifications. No warranty is expressed or implied.

Sincerely,

Jeff Laikam, P.E.
RCE#68586

Attachment 1

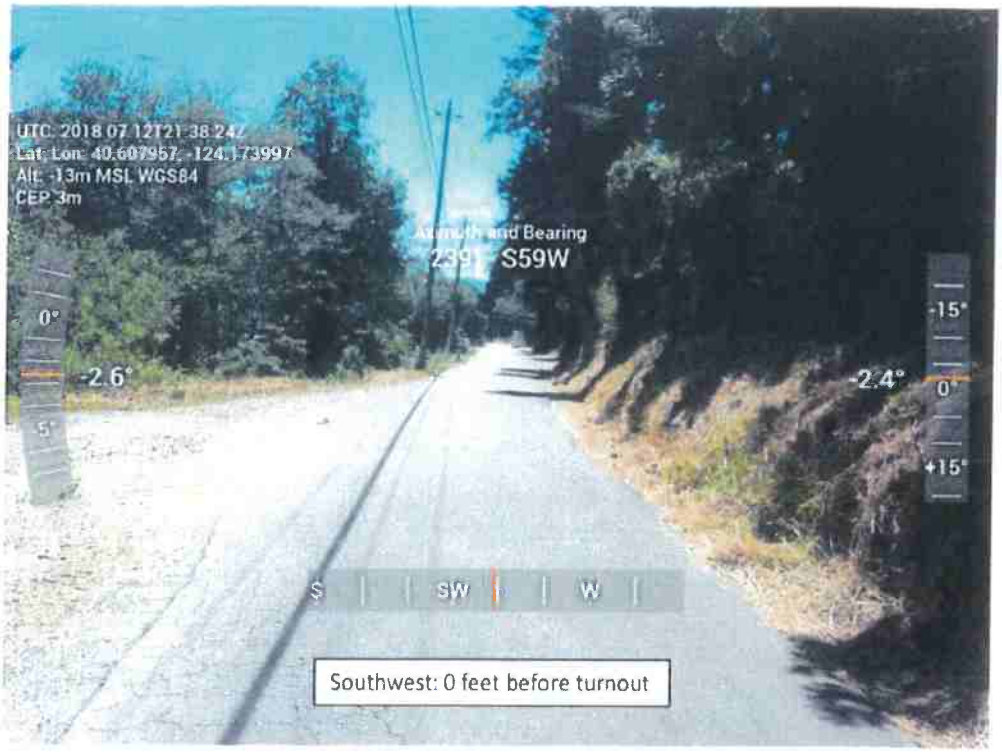


Attachment 2

1

2

3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CEP: 3m
Azimuth and Bearing
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0°
-2.6°
5°
-15°
0°
-2.4°
+15°
S
SW
W
Southwest: 0 feet before turnout

4


UTC: 2018 07 12T21:41:27Z
Lat, Lon: 40.608193, -124.173839
Alt: -10m MSL WGS84
CEP: 4m
Azimuth and Bearing
223° S43W
0°
-1.8°
-5°
-15°
0°
-2.9°
+15°
S
SW
W
Southwest: 100 feet before turnout

Attachment 3

DATE	TIME	OPR	EMP	NAME	PHONE	ROAD	#	SERVICE REQUESTED	DLVD	RESOLUTION
1/12/2016	1330	wbm	665	Renee	834-0140	Palmer Blvd	3H065	potholes under the overpass need to be filled water is running over the road instead of in the ditch and now there are cracks near their Fire	emailed	patched
2/3/2016	1522	wbm	665	Kevin Farmer w/PCCSD	272-1587	Palmer Blvd	3H065	hydrant	emailed	checking if ours Slide is on private property. Not yet
1/20/2017	1312	eb	627			Palmer Blvd	3H065	Slide on near Page Way	emailed	onto county road.
10/9/2017	1030	wbm	627	Carol Nichols	725-7970	Palmer Blvd	3H065	dumped cart across from 224	1030	removed

Cultivation Practices

Cultivation practices will vary greatly between individuals and organizations depending on location, strains, objectives, and personal preferences. Other dependencies include growing for quantity, to simply fill a greenhouse similar to a factory, or for quality, to produce unique product or to develop specific cultivars for medical and recreational reasons. Our practice is one of quality and quantity, to fill and refill greenhouses used for flowering through clones, grown from our moms, started from our seed bank, and plants started from our seeds.

In Humboldt, the default calculation from the internal department policy to determine propagation area/veg square footage of 10% of permitted flowering space, does not adequately provide ample space for our operations, because we:

- cultivate four to five harvests per calendar year
- grow from seeds
- harvest clones from Mom plants grown on location
- develop proprietary strains

Our company needs to be self-sufficient in developing our own clones, seeds and Moms for these reasons:

- control over product development
- reduce risk of contamination into our facilities
- reduce costs

While ESG wants to consistently grow specific strains from our own seed stock, we want to develop from seed and cross viable moms especially when the goal is to achieve certain strain characteristics. Humboldt county has the best conditions to produce outstanding strains and cultivars, and as hand crafted cultivators we want to take advantage of the natural growing conditions and the existing cultivator skills.

The process to produce a desirable cultivar can take several cycles to produce. Besides the plants having to first express their sexuality, then the selected best plants need to be cross pollinated to generate a new strain of seed. These seeds need to go through their grow cycle(s) before the cultivator accepts the desired cultivar. Only then will the selected females be grown large enough to produce clones and seeds for future use. To maintain the cultivar, the entire process is repeated as eventually the moms will be retired. For our practice, moms are good for two to three seasons until they are retired.

Dimension Calculations

From the above description on the cultivar process, proper space is required to develop cultivars to grow the best plants possible including female and male plants. For any cultivator developing cultivars, there should be no space limitation.

To fill one 3,000 ft^2 greenhouse requires 1,200 to 1,800 clones, strain/cultivar dependent to grow using our cultivation practices. To produce this number of clones from moms, requires 40 moms. Moms require a minimum 3' diameter to grow in a propagation area.

The basis for the calculations is to fill each 3,000 ft^2 greenhouse through clones from moms and from seed. Calculations provided include:

- Seed and clone space
- Mom space
- Total required Space

Clone/Seedling Space

The seedlings or clones will start off in small grow cubes. They will be transplanted into air pots eventually up to the size of a 9" diameter grow pot.

- 9" diameter pots = .44178 ft2
- 1,200 clones = 530.1 ft2
- 1,800 clones = 795.2 ft2

To fill one 3,000 ft^2 greenhouse requires 1,200 to 1,800 clones, strain/cultivar dependent and for our particular method of cultivating. To fill the greenhouse from clones using 9" pots will require between 530 ft^2 and 795 ft^2 of propagation area space. This area does not include working space between pots inside the propagation area.

Mom Space

The moms will start off the same as the seedlings in small grow cubes. They will be transplanted several times, finally requiring roughly a 3' diameter growing pot (space).

- 3' diameter grow space = 7.0686 ft2
- 40 moms will occupy 282.7 ft2
- To fill one 3,000 ft2 greenhouse requires clones from 40 potted moms.

Total Required Space

The total propagation space that includes the space for clones and moms needed for a 2,880 ft^2 planned greenhouses is between 812 and 1,077 ft^2. This is between 28% and 38% of flower space. The totals include:

- Between 530 - 795 ft^2 clone propagation area
- 282 ft^2 mom space

Note these calculations do not take into consideration any working space, aisles, or vegetation area. For the clones, the propagation area requires the following:

- Two 3'x3' working tables
- A working area around the tables and chairs
- Clear door entrance

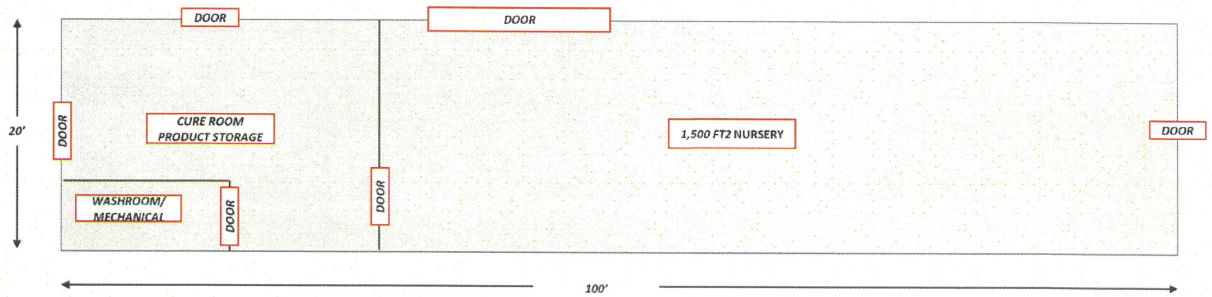
Our cultivation practices require all the work on the clones, seedlings, and moms to be conducted entirely in the propagation area until they are ready to be moved to the greenhouses. This reduces the plants chances of exposure to viruses, mold, insects, temperature change and other unnecessary risks.

For the two 2,880 ft^2 greenhouses our farm would need between 1,624 ft^2 and 2,154 ft^2 of dedicated propagation area to maximize the operation. However, ESG is willing to work within the 25% propagation allowance recommended by Director Ford to the Planning Commission. As a result, we are requesting 1,500 ft^2 of dedicated propagation area for this operation.

Operations Building

The 2,000 ft^2 operations building is not built and can still be designed to accommodate a cure and storage room plus the 1,500 ft^2 dedicated propagation area.

OPERATIONS BUILDING 2,000 SQ FT



ROOMS ARE NOT TO SCALE

Timely approval of this minor modification by the Planning Department will allow ESG to move through the building design, approval process, and construction in preparation for the 2022 season.

ATTACHMENT 4

REFERRAL AGENCY COMMENTS AND RECOMMENDATIONS

The project was referred to the following referral agencies for review and comment. Those agencies that provided written comments are checked off.

Referral Agency	Response	Recommendation	Location
City of Fortuna		No Response	
Building Inspection Division	✓	Conditional Approval	**Attached**
Division Environmental Health	✓	Conditional Approval	**Attached**
Fire Protection District	✓	Conditional Approval	**Attached**
California Department of Fish & Wildlife		No Response	
Community Services District	✓	Conditional Approval	**Attached**

COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING
3015 H STREET, EUREKA, CA 95501 ~ PHONE (707) 445-7245

RECEIVED
OCT 27 2021
Humboldt County
Cannabis Svcs.

10/25/2021

Project Referred To The Following Agencies:

Fortuna, Environmental Health, Building Inspections, CSD: Palmer Creek, FPD: Fortuna, Cal Fish & Wildlife

Applicant Name Emerald Sky Growers **Key Parcel Number** 200-232-026-000

Application (APPS#) PLN-2020-16733 **Assigned Planner** Steven Santos 707-268-3749

Please review the above project and provide comments with any recommended conditions of approval. To help us log your response accurately, please include a copy of this form with your correspondence.

Questions concerning this project may be directed to the assigned planner for this project between 8:30am and 5:30pm Monday through Friday.

County Zoning Ordinance allows up to 15 calendar days for a response. If no response or extension request is received by the response date, processing will proceed as proposed.

☐ If this box is checked, please return large format maps with your response.

Return Response No Later Than: 11/9/2021

Planning Clerk
County of Humboldt Planning and Building Department
3015 H Street
Eureka, CA 95501
Email: PlanningClerk@co.humboldt.ca.us **Fax**: (707) 268 - 3792

We have reviewed the above application and recommend the following (please check one):

☐ Recommend Approval. The department has no comment at this time.

☒ Recommend Conditional Approval. Suggested conditions attached.

☐ Applicant needs to submit additional information. List of items attached.

☐ Recommend Denial. Attach reasons for recommended denial.

Other Comments: _____

10-25-21
DATE:

Ross Estes
PRINT NAME:

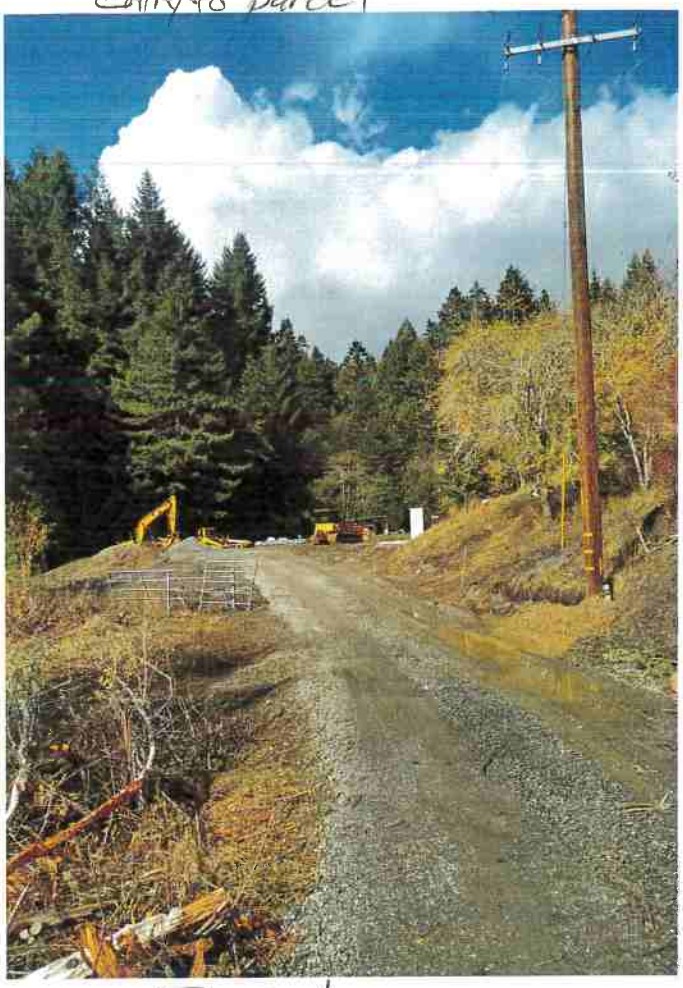
Horse stall ? on right

View N to S

Current grading

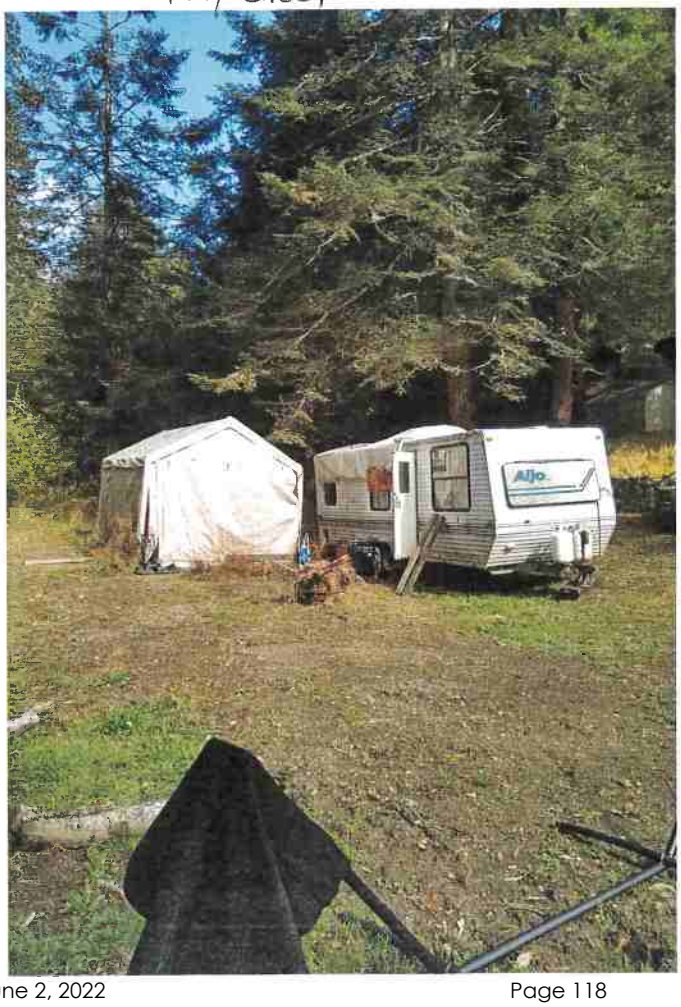
Current grading

Entry to parcel



View N to S, Horse stall? on right

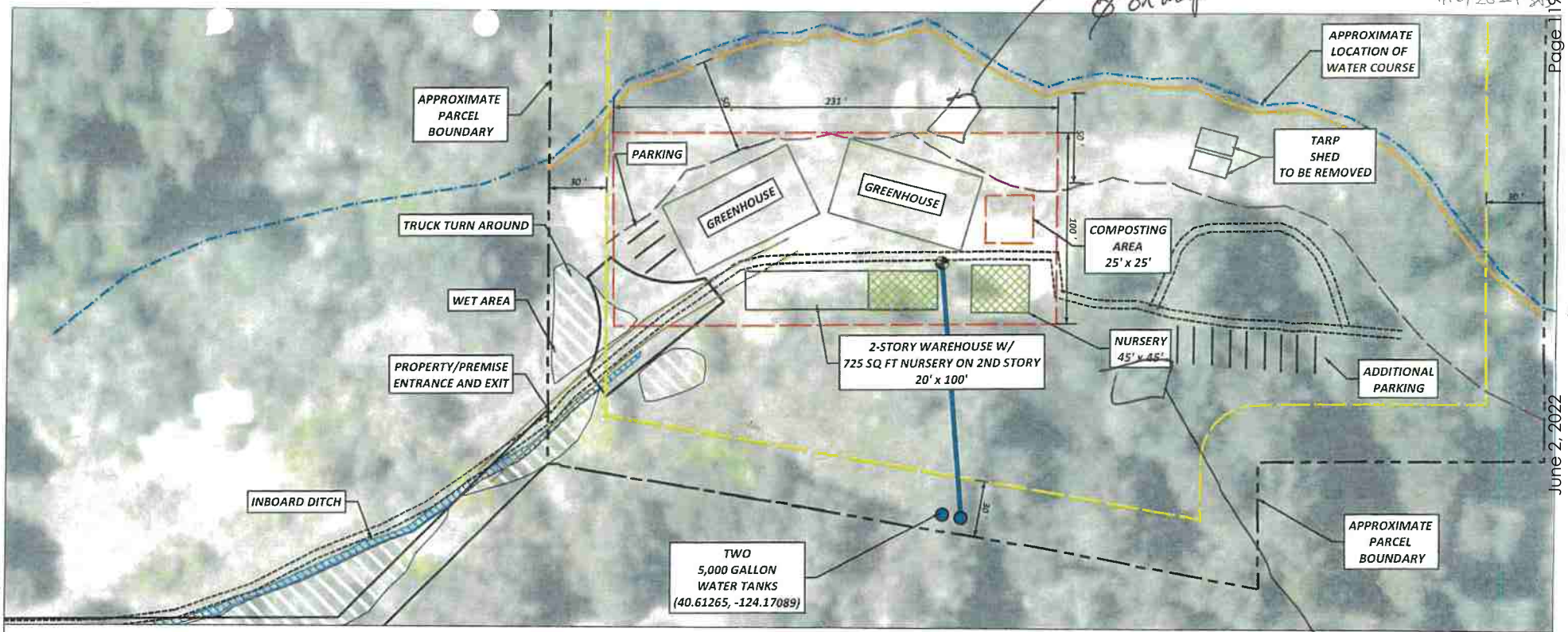
Tarp Shed



Norman 617 0058

Horsestall? ✗ on map

4/16/2021 Site



Carport/Tent Shed ✗ on map

EXPLANATION

- WELL IRRIGATION AND FIRE SUPRESSION (40.6126, -124.1713)
- 5,000 GALLON CAPACITY PLASTIC WATER TANK (40.6126, -124.1708)
- APPROXIMATE WATER COURSE LOCATION
- WATER DISTRIBUTION LINE
- ROAD
- APPROXIMATE PARCEL BOUNDARY
- TOP OF STREAM BANK
- 50' STREAM SETBACK
- 30' SETBACK FROM PROPERTY LINE
- SURVEYED ROAD
- EASEMENT
- PREMISE BOUNDARY 23,163 SQ. FT.
- NURSERY (2,750 SQ FT TOTAL)
- GREENHOUSE 40' X 72' (5760 SQ. FT)
- COMPOSTING AREA
- BUILDINGS
- TRUCK TURN AROUND
- WET AREA
- INBOARD DITCH

NOTES:

-NO SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS, OR TRIBAL CULTURAL RESOURCES AREA KNOWN WITHIN 600 FEET OF THE CULTIVATION SITE.
-NO RESIDENCE
-NO OTHER CANNABIS BUSINESS
-NO WATER CROSSING
-NO SHARED AREA
-ONLY ONE PROPERTY AND PREMISE ENTRANCE AND EXIT
-NO TREES WILL BE REMOVED
-TREE TYPES INCLUDE: COAST REDWOOD, DOUGLAS FIR, GRAND FIR, RED ALDER AND WILLOW
-OFFSITE ACTIVITIES INCLUDE PROCESSING AND PACKAGING
-OUTSIDE OF THE AG LAND AND PREMISE, THE PROPERTY IS FORESTED

0 50 ±

1"=50'±

DATA SOURCES: IMAGE SOURCE NAIP 2018;
PARCEL BOUNDARY SURVEYED BY POINTS WEST SURVEY

Norman Kroon Emerald Sky Plot Plan 636 Palmer Boulevard, Fortuna, California		Plot Plan APN: 200-232-026 SHN 019106
April 2021	SITE_Fig1_SiteMap	Figure 1

Path: \\eureka\Projects\2019\019106-Emerald Sky\GIS\PRJ_MXD\SITE_Fig1_SiteMap.mxd User Name: pla4d DATE: 4/15/21, 10:26AM

DEH Referral Response 7/6/2021 Taken from Accela

Processing activities must be supported by an approved permanent means of sewage disposal. Seasonal/outdoor cultivation sites may be supported by portable toilets. Applicant must obtain a permit for, and install, an approved onsite wastewater treatment system (OWTS) or connect to public sewer to support the processing location. Applicant must either install approved OWTS, connect to public sewer, or provide portable toilets to support cultivation areas.

Industrial wastewater tailings from indoor cultivation activities cannot be discharged to OWTS. Contact North Coast Regional Water Quality Control Board regarding industrial wastewater disposal requirements.

-------FORTUNA FIRE PROTECTION DISTRICT-------

320 SO. FORTUNA BLVD. FORTUNA, CA. 95540
(707)725-5021

"At your service"

"This institution is an equal opportunity provider and employer"

Referral comments

Date: September 1, 2021

Project: Emerald Sky Growers App# PLN-2020-16733

Project location: 636 Palmer Blvd. Fortuna

Comments:

Please show and/or describe the following regarding access
- Road width – 12 foot
- Road capacity – all weather capability / weight capacity (60,000)
- Turn-a-round dimensions (turn-a-round will need to be dedicated to that use only)
- Turn-out provisions (required at 150 feet and 400 foot intervals as necessary – TBD)
- Gate access if applicable (motorized gates require knox box switch)
- Address identification at road/driveway intersection

Please show and/or describe intended water supply for fire suppression (dedicated)
- Minimum ~~10,000 gallons~~ / 5,000 acceptable (hydrant approx. 1,000 ft. away)
- 3 inch supply to standpipe
- 2 ½ male NH with cap
- Access to standpipe for fire apparatus

Lon Winburn

Fortuna Fire Protection District

COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING
3015 H STREET, EUREKA, CA 95501 ~ PHONE (707) 445-7245

RECEIVED
JUL 14 2021
Humboldt County
Building Division

RECEIVED
JUN 29 2021
BY:

6/29/2021

Project Referred To The Following Agencies:

Fortuna, Environmental Health, Building Inspections, CSD: Palmer Creek, FPD: Fortuna, Cal Fish & Wildlife

Applicant Name Emerald Sky Growers **Key Parcel Number** 200-232-026-000

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☐ If this box is checked, please return large format maps with your response.

Return Response No Later Than: 7/14/2021

Planning Clerk
County of Humboldt Planning and Building Department
3015 H Street
Eureka, CA 95501
Email: PlanningClerk@co.humboldt.ca.us **Fax**: (707) 268 - 3792

RECEIVED
JUN 29 2021
BY:

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☐ Recommend Conditional Approval. Suggested conditions attached.

☐ Applicant needs to submit additional information. List of items attached.

☐ Recommend Denial. Attach reasons for recommended denial.

Other Comments: Palmer Creek CSD utility is For Residential uses only!

DATE: 6/29/2021 PRINT NAME: KEVIN FARMER

CSD referral response
16733

Palmer Creek Community Services District

PO Box 309
Fortuna Ca 95540
707 725 0544

January 31, 2022

Humboldt County Planning and Building Department
Cannabis Division
825 5th Street
Eureka, CA 95501

Attention: Steve Santos

The Palmer Creek Community Services District (PCCSD) will provide water and sewage services for the future residence at 636 Palmer Blvd, Fortuna.

PCCSD has granted the services to the property for use by residential use only Water usage is not to be used for any commercial or legal cannabis operation.

Should you require additional information, please contact me at 707 272 1587.

Regards,

Kevin Farmer

Cc PCCSD Board of Directors

APN 16733

Palmer Creek Community Services District
P.O. Box 309
Fortuna, CA 95540
707 725 0544

County of Humboldt
Planning and Building Dept.

Elizabeth Schatz,

The Palmer Creek Board of Directors has concerns regarding the commercial use of District water and sewer connections. The District water and sewer policy is for residential use only.

The parcel at 636 Palmer Blvd (APN: 200-232-026) has been approved for sewer service (*note: all new sewer connections need to be approved by City of Fortuna, see attached letter from City*) with the explicit condition of residential use only. Water Services in the District are also for residential use only.

The commercial project for Emerald Sky Growers (APN:200-232-026) recently applied for a Conditional Use Permit (December 15th 2020) for a commercial nursery.

This communication is to clearly state the position of the Palmer Creek Community Service District relating to the services provided by this Special District, residential water and sewer. No water and sewer services will be approved for commercial projects. All new residential sewer service connections are subject to approval by the City of Fortuna due to the agreement between Palmer Creek CSD and City of Fortuna.

The Board of Directors for Palmer Creek CSD is seeking your assurance that these conditions are known to your planning and building departments. It would be helpful if the District could be included with future applications of this nature. The Board of Directors wants to ensure that all customers are served equally.

The District was not included in this recent notice of application (12/15/20). The District had responded to a similar request for Emerald Sky Growers (11/9/17) Commercial Cannabis operation with the stipulation that District water and sewer was only to be used at the future residential uses.

Please call anytime with concerns or suggestions moving forward.

Thank You

Kevin Farmer
Palmer Creek CSD
Operations Manager
725 0544
cell * ***707 272 1587***

cc. Lowell Wallace
Palmer Creek CSD Board Chair

/file/kf/