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: May 6, 2021
To: Humboldt County Zoning Administrator

From: Cliff Johnson, Supervising Planner

Subject: **Avicenna Holdings, LLC, Special Permit**
Application Number: PLN-2020-16633
Assessor's Parcel Number:105-111-007
Petrolia area, Humboldt County Ca.

Table of Contents **Page**

Agenda Item Transmittal 2
Recommended Action and Executive Summary 3
Draft Resolution 6

Maps
- Topo Map 10
- Zoning Map 11
- Aerial Map 12
- Site Plans 13

Attachments
- Attachment 1: Recommended Conditions of Approval 14
- Attachment 2: CEQA Addendum 20
- Attachment 3: Applicants Evidence in Support of the Required Findings 24
- Attachment 4: Referral Agency Comments and Recommendations 115

Please contact Anna Colegrove-Powell, Planner I, at 707-268-3737 or by email at acolegrove-powell@co.humboldt.ca.us, if you have any questions about the scheduled public hearing item.

AGENDA ITEM TRANSMITTAL

Hearing Date	Subject	Contact
May 6, 2021	Special Permit	Anna Colegrove-Powell

Project: The applicant is seeking a Special Permit for 43,560 square feet of new outdoor cultivation and ancillary propagation and drying facilities. The outdoor cultivation will be utilizing dry farming techniques. Water for irrigation of the propagation facility will be provided by a rainwater catchment system from the proposed metal structure used for Drying. Water storage consists of eleven (11) 5,000-gallon hard side storage tanks proposed to be added on-site, totaling 55,000 gallons of water storage capacity. Maximum annual water usage for irrigation purposes is estimated to be 50,000 gallons per year. Irrigation water will be used for propagation and initial ground planting. Once the plants have been planted into the ground, irrigation will discontinue after 3-4 weeks. Supplemental lighting will be utilized for propagation and drying facilities. Processing such as drying and curing will occur on-site in a proposed 5,000sf metal structure. Power for the propagation and drying structure will be provided by PG&E. During peak production up to seven (7) additional employees may be contracted, in addition to the five (5) owner-operators conducting regular operations; Total employees for this project during peak production will be up to twelve (12) employees.

Project Location: This project is located in Humboldt County, in the Petrolia area, on both sides of Conklin Creek Road, approximately 1.82 miles east from the intersection of Conklin Creek Road and Mattole Road, on the property known as 2001 Conklin Creek Road and on the properties known to be in the NE ¼ of Section 11, in the NW ¼ , the NW ¼ of the SW ¼, the W ½ of the NE ¼ and the W ½ of the NE ¼ of the NE ¼ of Section 12, and in the SE and SW ¼ of the SE¼ of Section 1 of Township 02 South, Range 02 West, Humboldt Base & Meridian.

Present Plan Land Use Designations: Agriculture Grazing (AG) Density: 20 to 160 acres per unit, 2017 General Plan, Slope Stability: Low Instability (1) & Moderate Instability (2).

Present Zoning: Agriculture Exclusive (AE)

Record Number: PLN-2020-16633

Assessor's Parcel Number: 105-111-007; 105-121-003

Applicant	Owner	Agent
Avicenna Holdings, LLC	7B Ranch LLC	SL Consulting Services Inc.
Benjamin Brown	Joseph Brown	Steve Lu
P.O. Box 199	P.O. Box 30	973 Dowler Drive
Petrolia, CA 95558	Petrolia, CA 95558	Eureka, CA 95501

Environmental Review: An Addendum to a previously adopted 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: None.

Avicenna Holdings, LLC
Record Number: PLN-2020-16633
Assessor's Parcel Number: 105-111-007;105-121-003

Recommended Zoning Administrator 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 Zoning Administrator has considered the Addendum to the Commercial Cannabis Land Use Ordinance (CCLUO) as described by Section§15164 of the State CEQA Guidelines, make all of the required findings for approval of the Special Permit and adopt the Resolution approving the Hidden Prairie Farms, project as recommended by staff subject to the recommended conditions.

Executive Summary: The applicant is seeking Special Permit for 43,560 square feet (sf) of new cultivation, 6,000 sf of ancillary propagation and one 5,000 sf metal structure for Drying and Storage purposes. Water for irrigation will be provided by a proposed rainwater catchment system tied into the Drying and Storage structure. Dry farming methods will be utilized during cultivation, and irrigation will be primarily utilized for propagation. Maximum annual water use is estimated to be 50,000 gallons/year. Proposed water storage will consist of eleven (11) 5,000-gallon hard side storage tanks. Drying and curing will occur on-site within the proposed 5,000 sf metal structure. Further processing will occur off-site at a licensed third-party facility. Propagation will utilize supplemental lighting for up to 4 hours per day and adhere to International Dark Sky Standards. Power for the drying and propagation facilities will be sourced from PG&E. The five (5) owner-applicants propose to primarily conduct operations and may hire up to seven (7) additional employees during peak production. A total of twelve (12) employees may be employed during peak production.

Water Resources

The applicant projects a maximum annual water usage of 50,000 gallons and expects to use between 35,000 gallons to 50,00 gallons per year. Irrigation water for the project will be sourced from a proposed rainwater catchment system that will catch rainwater from the gutters of the proposed 5,000 sf metal drying and storage structure. Eleven (11) 5,000-gallon water storage tanks will be used to store rainwater. Minimal irrigation will be conducted for 3-4 weeks after in-ground planting. Dry farming techniques will be used for cultivation once plants are established. Irrigation will primarily be used for the ancillary propagation nursery, which will utilize drip irrigation and hand watering techniques to minimize water consumption.

Energy Resources

The project will not utilize any power during the cultivation phase. Power will be sourced from PG&E and utilize the renewable energy rate for propagation and drying facilities. In accordance with Humboldt County Code Section 314-55.4.12.5.2, the applicant conforms with the performance standards for energy use.

Biological Resources

A *Biological Habitat Assessment* was prepared by Hohman and Associates dated August 2020. The report assesses the potential habitat for rare or endangered species within the Biological Assessment Area (BAA), which encompasses a 1.3-mile buffer from the project site. The report utilized database search results, as well as field survey methods to assess the potential habitat for threatened or endangered species. The results determined that there are two habitat types within the BAA, an upland habitat and riparian habitat. The assessment did not detect any rare or endangered species on site in

either potential habitat type. Best Management Practices have been provided to ensure the longevity of associated habitat types. In addition, the assessment recommends that an in-season botanical survey be conducted. As a condition of approval, the applicant will submit a botanical survey prior to commencing cultivation. Furthermore, the project will be conditioned to meet the Best Management Practices within the Biological Habitat Assessment to ensure ongoing project work will not negatively affect the potential habitat for rare and endangered species.

A review of the Humboldt County WebGIS found that parcel is encompassed with potential habitat for leafy reed grass. The *Biological Habitat Assessment* was conducted out of season for botanical survey, and the applicant will submit a botanical survey prior to cultivation to determine the presence, or absence of leafy reed grass. In addition, potential habitat for Summer Steelhead and Pacific lamprey occurs within the Mattole River and at the mouth of Conklin Creek, located over 3,600 feet away. The cultivation area and associated facilities are located outside of the required Streamside Management Area (SMA) buffer; Therefore, staff has determined the project is unlikely to have an adverse effect on Summer Run Steelhead or Pacific Lamprey. The habitat assessment notes that the immediate area surrounding the project site consists of grasslands, and is not likely to impact mature forest habitat, and therefore will not negatively impact Northern Spotted Owl (NSO) habitat. The closest NSO activity center is located 1.8 miles away to the East in a heavily forested area.

The applicant has also submitted a *Wetland Determination Report* conducted by Naiad Biological Consulting dated March 2021. The report details the finding from several test pits taken on the parcel used to determine the hydrological conditions of the area, as well as other wetland indicators such as vegetation type. The report determined that whilst there are riparian habitats adjacent to the project site, the proposed project site does not contain hydric soil or wetland vegetation; Indicating that the proposed project site is not associated with any wetland or riparian features. Best Management Practices are recommended for any disturbance near wetland and riparian habitats. The project will be conditioned to adhere to the recommendations within the Wetland Determination Report.

Geologic Suitability

A review of the Humboldt County WebGIS shows the subject parcel as having slopes less than 15 percent and categorized as having low instability. However, the project is located 250 feet downslope from a historic landslide. In addition, the Honeydew Fault Zone is located across the Mattole River at a distance of .8 miles.

Timber Conversion

No timberlands are proposed to be converted for this project.

Cultural Resource

A *Cultural Resource Investigation* was prepared by Nick Angeloff , dated July, 2020. No cultural resources were identified within the project parcel during the on-site investigation. In addition to the on-site field survey, the investigation also completed a database search of the Native American Heritage Commission (NAHC) Sacred Lands Files for record of culturally significant artifacts /sites relating to the project location. The results from the NAHC database were negative. The report concluded that the project will not adversely impact cultural, Tribal, or historic resources with the proposed footprint. The report was forwarded to the Tribal Historic Preservation Officer of the Bear River Band of the Rohnerville Rancheria. As a recommendation of the *Cultural Resource Investigation*, the project will be conditioned to adhere to the Inadvertent Discoveries Protocol.

Security and Safety
The project site will be monitored by motion sensors and an alarm system will be installed in the drying and storage barn. Trail cameras will be installed at the entrance/exit of the project site. In addition, a Dakota Alert metal detecting probe will be buried under the driveway leading to the project site to detect vehicles entering or exiting the premises during non-work hours.

The subject parcel is located within both the Petrolia Fire Protection District and State Fire Responsibility Area where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. A review of the Humboldt County WebGIS showed the subject parcel as being located in an area deemed to have a moderate fire hazard severity. The project is conditioned to adhere to the requirements of the County's Fire Safe Ordinance, which establishes development standards for minimizing wildfire danger in state responsibility designated areas. The project was referred to CALFIRE in October of 2020.

Access

The project site is accessed via Conklin Creek Road, approximately 1.82 miles East from the intersection of Conklin Creek Road and Mattole Road, on the property known as 2001 Conklin Creek Road.

The project was referred to the Department of Public Works in October of 2020 who recommended approval of the project with conditions that would require the applicant to improve visibility where the private road meets the County maintained road. If applicable, Public Works has also recommended the private road be paved where it intersects with the County maintained road. The project has been conditioned to meet the recommendations of the Public Works Department to meet the County Roads standards.

Environmental Review and Staff Recommendation

Environmental review for this project was conducted and based on the results of that analysis, staff finds that all aspects of the project have been considered in a previously adopted Environmental Impact Report that was adopted for the Commercial Cannabis Land Use Ordinance and has prepared an addendum to this document for consideration by the Zoning Administrator (See Attachment 2 for more information). Staff recommends that the Zoning Administrator describe the application as a part of the consent agenda, survey the audience to see if any person would like to discuss the application and, if no one requests discussion, make all the required findings based on the evidence in the record and approve the application subject to the recommended conditions.

Alternatives: Several alternatives may be considered: 1) The Zoning Administrator could elect not to hear this item and put the decision making in front of the Planning Commission. Any decision to place this matter before the Planning Commission must be done before opening the public hearing on this project; 2) The Zoning Administrator could elect to add or delete conditions of approval; 3) The Zoning Administrator could deny approval of the requested permits if you are unable to make all of the required findings. Planning Division staff is confident that the required findings can be made based on the submitted evidence and subject to the recommended conditions of approval. Consequently, planning staff does not recommend further consideration of these alternatives.

RESOLUTION OF THE ZONING ADMINISTRATOR
OF THE COUNTY OF HUMBOLDT

Resolution Number 21-_____
Record Number PLN-2020-16633
Assessor's Parcel Number: 105-111-007; 105-121-003

Resolution by the Zoning Administrator of the County of Humboldt certifying compliance with the California Environmental Quality Act and conditionally approving the Hidden Prairie Farms, Special Permit request.

WHEREAS, **Avicenna Holdings, LLC**, submitted an application and evidence in support of approving a Special Permit for 43,560 square feet of new outdoor cultivation, 6,000 sf of ancillary nursery space, and appurtenant drying and storage facilities to support the operation.

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 Zoning Administrator held a duly noticed public hearing on May 20, 2021 and reviewed, considered, and discussed the application for a Special Permit and reviewed and considered all evidence and testimony presented at the hearing.

Now, THEREFORE BE IT RESOLVED, that the Zoning Administrator makes all the following findings:

1. FINDING: The applicant is seeking a Special Permit for 43,560 square feet of new cultivation, with ancillary propagation and drying facilities. The cultivation will utilize dry farming techniques. Water for irrigation will be provided rainwater catchment. Power is provided by PG&E. Up to twelve employees may be sourced during peak production.

EVIDENCE: a) Project File: PLN-2020-16633

2. FINDING: The requirements of the California Environmental Quality Act have been complied with. The Humboldt County Zoning Administrator has considered the Addendum to an Environmental Impact Report 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) A *Site Management Plan*, prepared by Timberland Resource Consultants, dated June 2020 demonstrating compliance with the North Coast Regional Water Quality Control Board Order No. 2015-0023

d) A *Cultural Resource Investigation Report* was prepared by Nick Angeloff, dated July, 2020. The report concluded that there are no cultural, Tribal, or historic resources within the project site. The report to was forwarded to the Bear River Band of the Rohnerville Rancheria. The Cultural Resource Investigation recommend inclusion of the inadvertent discovery protocol. The project is condition as such.

FINDINGS FOR SPECIAL PERMIT

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

EVIDENCE The CCLUO identified Agriculture Exclusive (AE)-zoned parcels five acres or larger as sites where existing cannabis cultivation activities could be allowed. The proposed cannabis cultivation, an agricultural product, is within land planned and zoned for agricultural purposes, consistent with the use of Open Space land for managed production of resources. The use of an agricultural parcel for commercial agriculture is consistent with the Open Space Plan and Open Space Action Program. Therefore, the project is consistent with and complementary to the Open Space Plan and its Open Space Action Program.

4. FINDING The proposed development is consistent with the purposes of the existing AE zone in which the site is located.

EVIDENCE Humboldt County Code section 314-55.4.6-6.5 allows cultivation of up to 43,560 sq. ft. of Cultivation Area with a Special Permit on a parcel over 5 acres. As set forth in the following subsections, Pre-Existing Cultivation Sites that meet all other Eligibility and Siting Criteria and Performance Standards, may be permitted within AE, AG, RA, FR, FP, TPZ, and U zoning districts, where accompanied by a Resource Production, General Plan land use designation or Residential land use designation requiring parcel sizes on more than 5 acres. The application is for 43,560 square feet of outdoor cultivation on a 16-acre parcel.

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

EVIDENCE

a) The applicant's primary energy is grid power from PG&E's renewable energy program, as required within the CCLUO.

b) The subject parcel 105-111-007 and a portion of 105-121-003 have been combined to comprise one legal parcel as described in the Notice of Lot Line Adjustment Certificate of Subdivision Compliance 1992-008641

c) The project will utilize dry farming methods which will use minimal irrigation. The irrigation water will be sourced from a proposed rainwater catchment system.

d) Access to the site is via Conklin Creek Road, approximately 1.82 miles East of the intersection of Conklin Creek Road and Mattole Road. The unnamed private access road that leads to the project site is approximately 0.1 miles from Conklin Creek Road. The project was referred to the Department of Public Works who recommended approval of the project with conditions that would require the applicant to improve visibility where the private road meets the County maintained road. If applicable, Public Works has also recommended the private

road be paved where it intersects with the County maintained road. The project has been conditioned to meet the recommendations of the Public Works Department to meet Category 4 County Roads standards.

e) The location of the cultivation complies with all setbacks required in Section 314-55.4.6.4.4. (a.-f.). It is more than 30 feet from any property line, more than 300 feet from any off-site residence, and more than 600 feet from any school, church, public park or Tribal Cultural Resource.

6. FINDING The cultivation of 43,560 square feet of outdoor cannabis cultivation and the 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 in a rural part of the County where the typical parcel size is over 20 acres. The proposed cannabis 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 cultivation 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 sizes in the area.

b) Irrigation water will be sourced from rainwater catchment, and not divert any surface waters.

c) Provisions have been made in the applicant's proposal to protect water quality and riparian habitat.

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 a) The parcel was not included in the housing inventory of Humboldt County's 2019 Housing Element. The approval of cannabis cultivation on this parcel will not conflict with the residential development standards of the Department of Housing and Community Development.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Humboldt County Zoning Administrator does hereby:

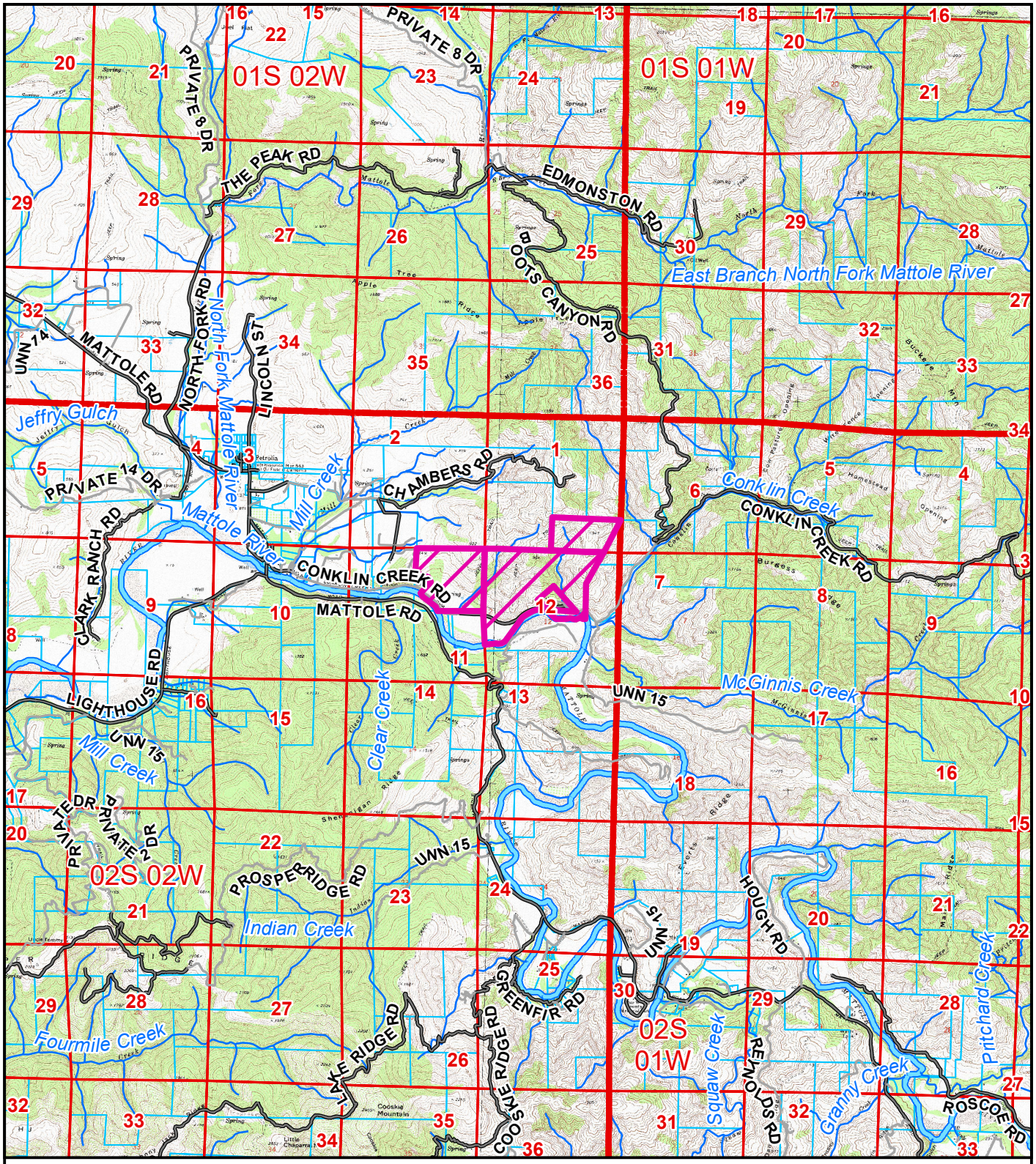
- Adopt the findings set forth in this resolution; and
- Conditionally approves the Special Permit for Avicenna Holdings, LLC, based upon the Findings and Evidence and subject to the conditions of approval attached here to as Attachment 1 and incorporated herein by reference; and

Adopted after review and consideration of all the evidence on May 20, 2021.

I, John Ford, Zoning Administrator 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 Zoning Administrator at a meeting held on the date noted above.

_____

John H. Ford, Zoning Administrator
Planning and Building Department



TOPO MAP
PROPOSED AVICENNA HOLDINGS, LLC
PETROLIA AREA
PLN-2020-16633
APN: 105-111-007; ET AL.
T02S R02W S1; S11; S12 HB&M (BUCKEYE MTN)

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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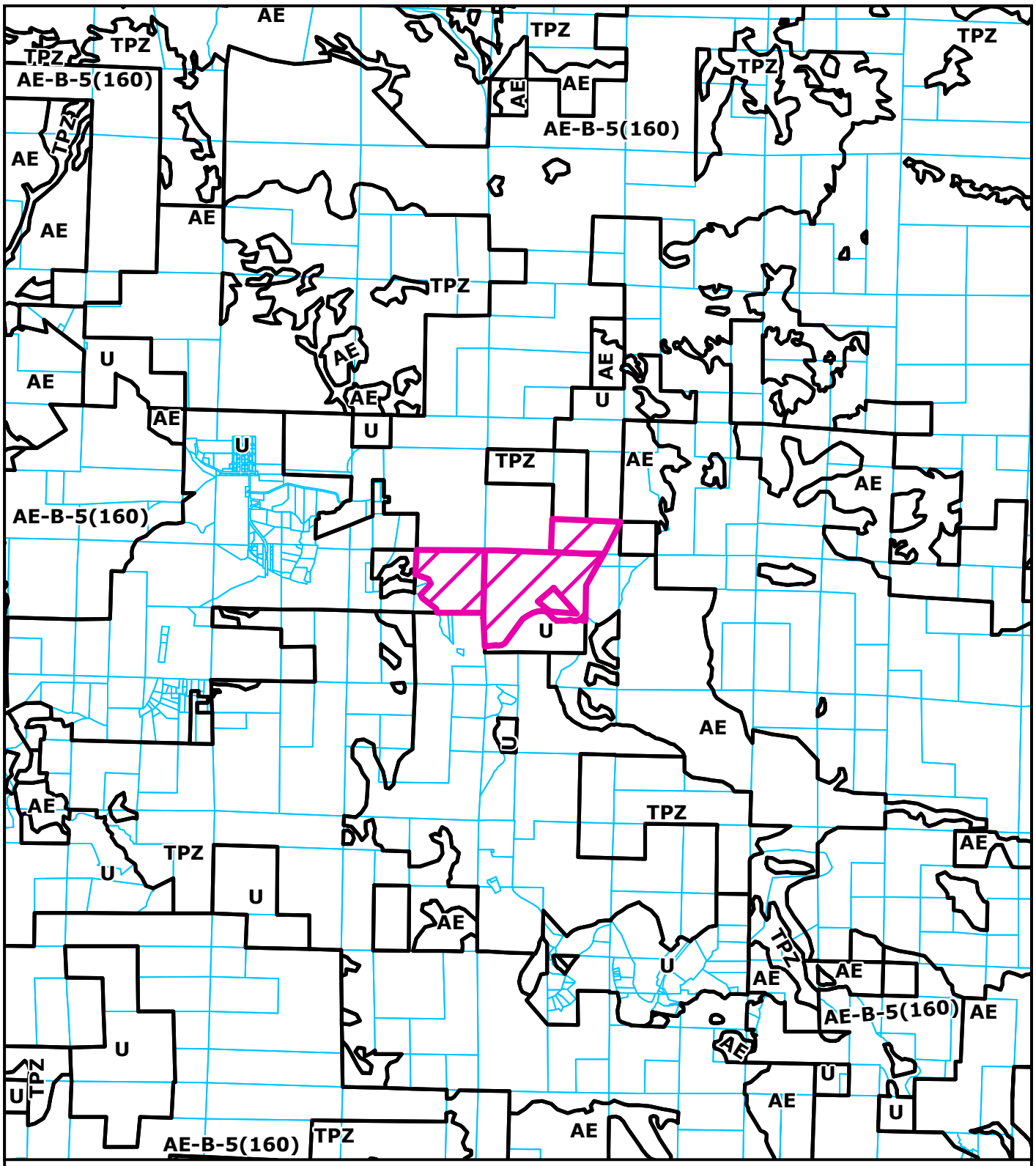


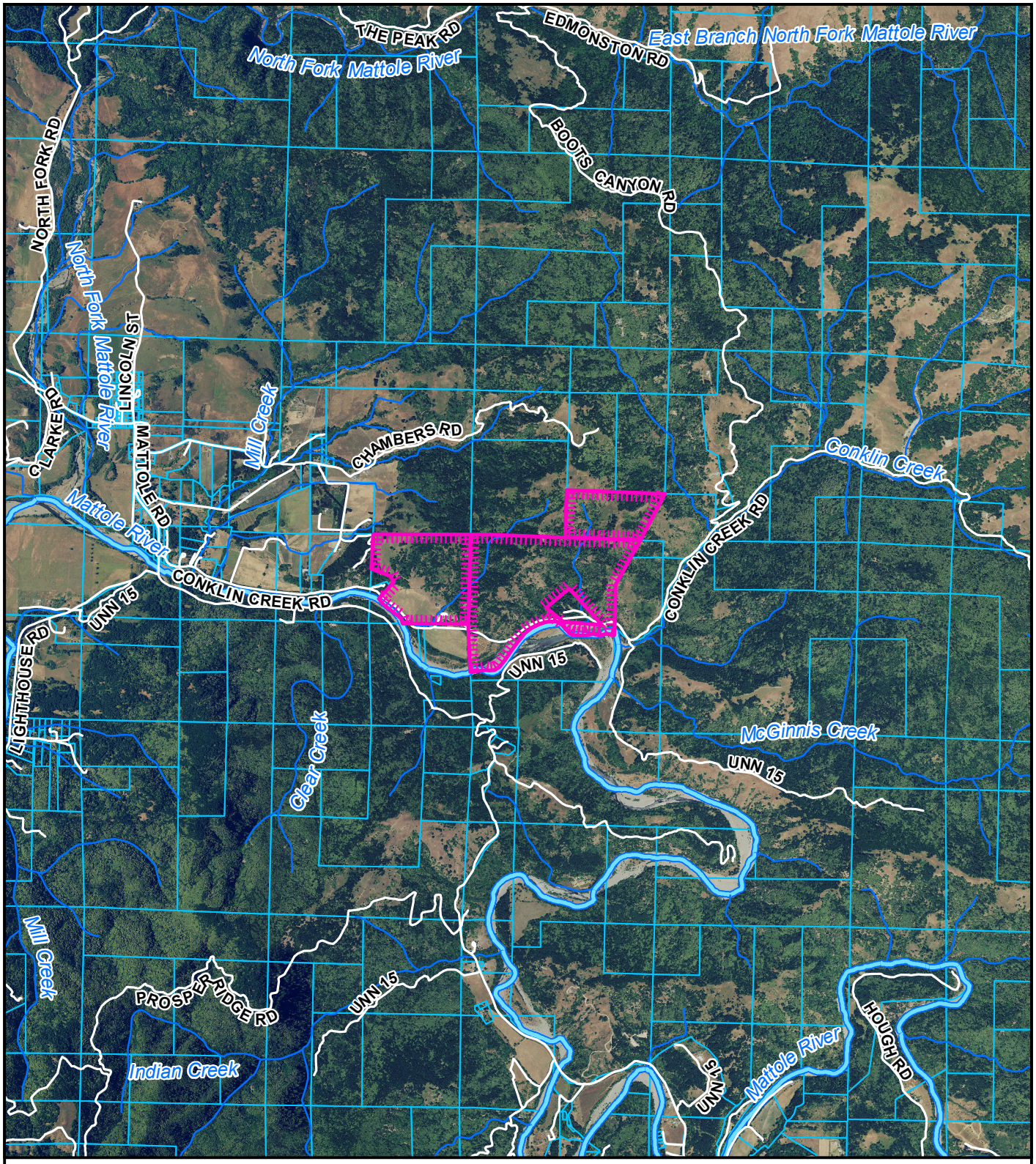
ZONING MAP
PROPOSED AVICENNA HOLDINGS, LLC
PETROLIA AREA
PLN-2020-16633
APN: 105-111-007; ET AL.
T02S R02W S1; S11; S12 HB&M (BUCKEYE MTN)

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 0.5 1 2 Miles



AERIAL MAP
PROPOSED AVICENNA HOLDINGS, LLC
PETROLIA AREA
PLN-2020-16633
APN: 105-111-007; ET AL.
T02S R02W S1; S11; S12 HB&M (BUCKEYE MTN)

Project Area =

N

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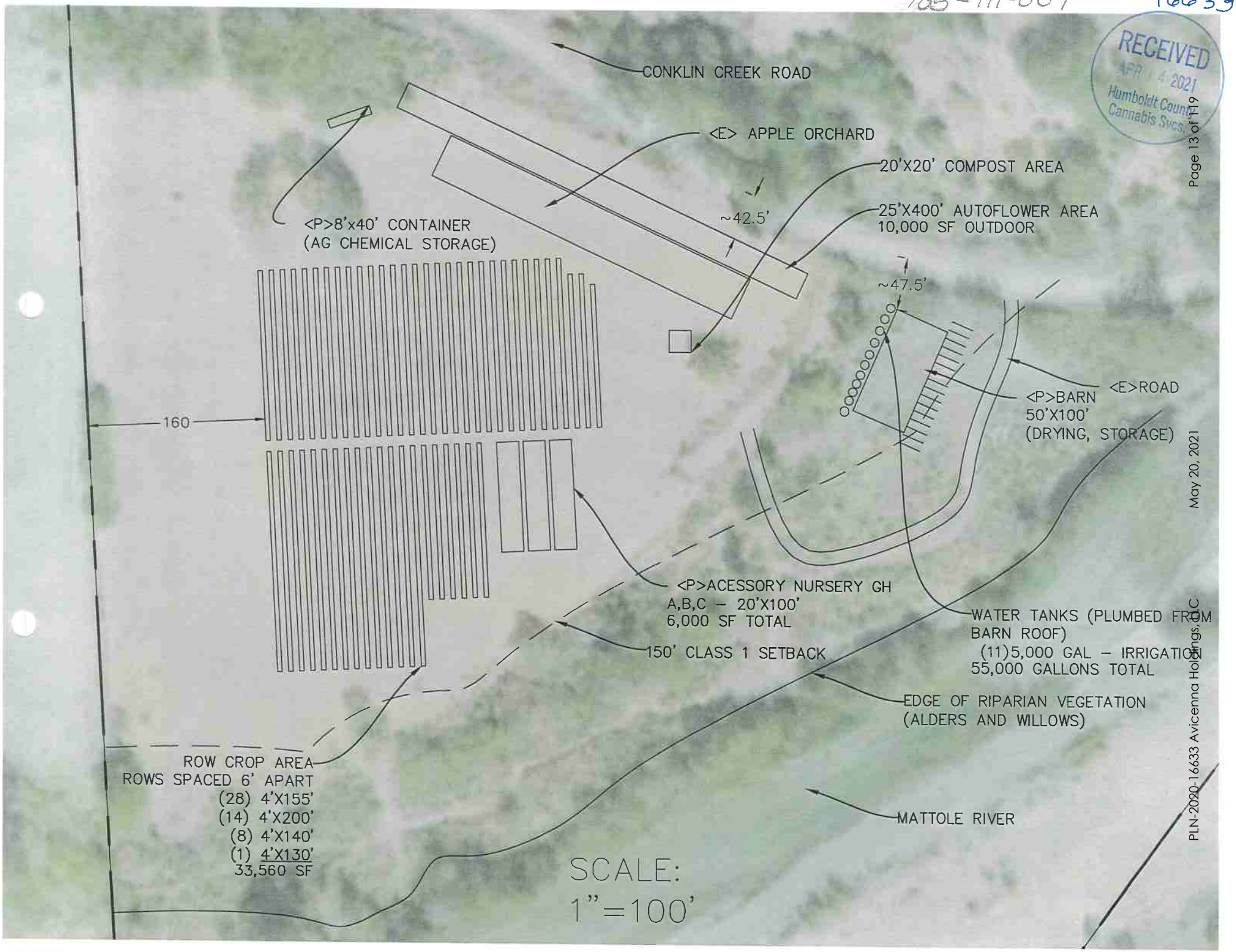
0 0.4 0.8 1.6 Miles

105-111-007 16633



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Page 13 of 119

May 20, 2021

PLN-2020-16633 Avicenna Holdings, LLC

ATTACHMENT 1

RECOMMENDED CONDITIONS OF APPROVAL

APPROVAL OF THE SPECIAL PERMIT IS CONDITIONED ON THE FOLLOWING TERMS AND REQUIREMENTS WHICH MUST BE SATISFIED BEFORE THE CANNABIS CULTIVATION OPERATION MAY BEGIN.

A. General Conditions

1. The applicant is responsible for obtaining all necessary County and State permits and licenses, and for meeting all requirements set forth by other regulatory agencies.

2. The applicant is required to pay for permit processing on a time and material basis as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors. The Planning and Building Department will provide a bill to the applicant after the decision. Any and all outstanding planning fees to cover the processing of the application to decision by the Hearing Officer shall be paid to the Humboldt County Planning Division, 3015 "H" Street, Eureka.

3. 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 (currently $750) 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.

4. A Notice of Determination (NOD) will be prepared and filed with the County Clerk for this project in accordance with the State CEQA Guidelines. The Department will file the NOD and will charge this cost to the project.

5. The applicant shall secure permits for all structures related to the cannabis cultivation and other commercial cannabis activity, including but not limited to, proposed drying and storage structures, or any activity with a nexus to cannabis. The plans submitted for building permit approval shall be consistent with the project description and the approved project site plan. A letter or similar communication from the Building Division verifying that all structures related to the cannabis cultivation are permitted will satisfy this condition.

6. Portable restroom facilities are to be provided for employees performing cultivation activities. A letter or similar communication from the DEH verifying that this has been completed will satisfy this condition.

7. The applicant shall adhere to the recommendations made by Public Works which would require the applicant to improve visibility where the private road meets the County maintained road to comply with Humboldt County Code 341-1. If the County Road has a gravel surface at the location of the driveway, the driveway apron shall be paved for a minimum width of 18 feet and a length of 50 feet where it intersects with the County road. An encroachment permit shall be secured before any work is initiated within the County right-of-way.

8. The applicant shall execute and submit "Exhibit B", the *road evaluation report form* for sections of Conklin Creek Road, as listed in the response from the Public Works Department prior to commencement of cultivation activity.

9. The applicant shall execute and file with the Planning Division the statement titled, "Notice and Acknowledgment regarding Agricultural Activities in Humboldt County," ("Right to Farm" ordinance) as required by the HCC and available at the Planning Division.

10. The applicant shall ensure all new development maintains a minimum setback of 30 feet from areas with a slope greater than 30 percent as recommended within the *Engineering-Geologic R-2 Soils Exploration Report*.

11. Prior to cultivation commencement, the applicant shall submit a floristic survey prepared by a qualified professional.

12. The applicant will adhere to the recommendations of the *Wetland Determination Report,* by adhering to the required setbacks from riparian and wetland features and following the Best Management Practices to maintain the integrity of water resources.

13. The applicant will adhere to the recommendations of the *Biological Habitat Assessment* to ensure that cultivation activities do not disturb the surrounding environment.

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

1. All artificial lighting shall be fully contained within structures such that no light escapes (e.g., through 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 be motion activated and comply with the International Dark-Sky Association standards and Fixture Seal of Approval Program; see: https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/.

2. Should the Humboldt County Planning Division receive complaints that the lighting or noise is not complying with the standards listed above in item B.1.; 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.

3. Prohibition on use of synthetic netting. To minimize the risk of wildlife entrapment, Permittee shall not use any erosion control and/or cultivation materials that contain synthetic (e.g., plastic or nylon) netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.

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

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

6. The use of anticoagulant rodenticide is prohibited.

7. The operator shall provide information to all workers 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.

8. 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

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

10. 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.

11. Possession of a current, valid required license, or licenses, issued by any agency of the State of California in accordance with the MAUCRSA, and regulations promulgated thereunder, as soon as such licenses become available.

12. 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.

13. 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).

14. Maintain enrollment in Tier 1, 2, or 3, certification with North Coast Regional Water Quality Control Board (RWQCB) 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.

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

16. 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.

17. 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).

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

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

20. Fuel shall be stored and handled in compliance with applicable state and local laws and regulations, including the County of Humboldt's Certified Unified Program Agency (CUPA) program, and in such a way that no spillage occurs.

21. The master log books maintained by the applicant to track production and sales shall be maintained for inspection by the County.

22. 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

23. Pursuant to the MAUCRSA, Health and Safety Code Section 19322(a)(9), 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."

24. Cultivators 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).

25. Cultivators engaged in processing 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.

26. 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.

27. All cultivators 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

28. Term of Commercial Cannabis Activity Special Permit. Any Commercial Cannabis Cultivation SP issued pursuant to the 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.

29. 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 Special Permit, immediately upon the expiration of any appeal period, or final determination of the appeal if an appeal has been timely filed pursuant to Section 55.4.13.

30. 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.

31. 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.

32. 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 CCLUO 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 Cannabis.

33. 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.

Informational Notes:

1. Pursuant to Section 314-55.4.11(a) of the CCLUO, if upon inspection for the initial application, violations of any building or other health, safety, or other state or county statute, ordinance, or regulation are discovered, the Planning and Building Department may issue a provisional clearance or permit with a written approved Compliance Agreement. By signing the agreement, the permittee agrees to abate or cure the violations at the earliest opportunity but in no event more than two (2) years after the date of issuance of the provisional clearance or permit. Plans for curing the violations shall be submitted to the Planning and Building Department by the permittee within one (1) year of the issuance of the provisional certificate or permit. The terms of the compliance agreement may be appealed pursuant to Section 314-55.4.13 of the CCLUO.

2. This provisional permit approval shall expire and become null and void at the expiration of one (1) year after all appeal periods have lapsed (see "Effective Date"), except where the Compliance Agreement per Condition of Approval #5 has been executed and the corrective actions pursuant to the agreement are being undertaken. Once building permits have been secured and/or the use initiated pursuant to the terms of the agreement, the use is subject to the Permit Duration and Renewal provisions of the Ongoing Requirements/Development Restrictions, above.

3. 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.

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

APN 105-111-007; 105-121-003 Connick Creek Road, Petrolia, County of Humboldt

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

April 2021

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 cannabis operations by establishing regulations for an existing unregulated land use to help prevent and reduce environmental impacts that are known to result from unpermitted baseline cultivation operations. The EIR prepared for the CCLUO also established local land use regulations to allow for continued 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. Commercial cannabis cultivation in existence as of December 31, 2015, was included in the environmental baseline for 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.

The project parcel is located in Humboldt County, within the Mattole River watershed near the community of Petrolia. The project site is located within a historic 100-year flood plain, on a flat terrace that has less than 15% slope and is classified as having low instability. The parcel is zones as Agricultural Grazing (AG) and his been historically utilized for cattle and sheep grazing. The project is located adjacent to the Mattole River. A *Wetland Determination Report* was conducted, and it was determined that the project site does not contain evidence of hydric soils or vegetation that would classify it as a wetland. The project site was surveyed, and a *Cultural Resources Investigation* was conducted for the project parcel. It was determined that the project site does not contain any Cultural Resources on-site. In addition, a Biological Habitat Assessment was conducted to determine the presence or potential habitat for rare or endangered species. The findings determined that the project site does not contain potential habitat for rare or endangered animal species. An in-season botanical survey will be conducted prior to cultivation to ensure the project site does not contain habitat for any rare or endangered plant species.

The applicant is seeking a Special Permit for 43,560 square feet of new outdoor cultivation utilizing dry farming methods. Cultivation will be planted in rows spaced 6 feet apart for walking paths. Approximately 6,000 sf of area will be utilized for propagation within three (3) greenhouses. Irrigation for propagation will be sourced from rainwater catchment tanks. Estimated maximum annual water usage for the project is 50,000 gallons (10 gal/sf). Applicant proposes to install eleven (11) 5,000-gallon rainwater catchment tanks for irrigation storage, totaling 55,000 gallons of water storage. Drying will occur on-site within a proposed 5,000 sf metal barn. Processing will occur off-site and be conducted by a licensed third-party distributor. Energy will be supplied from PG&E. Cultivation will be conducted by the five (5) owner/applicants; During peak production, up to seven (7) temporary employees may be hired. There may be a total of twelve (12) employees during peak production.

The project will comply with all provisions of the CCLUO intended to eliminate impacts to sensitive species from noise and from light and noise. Compliance with these and other measures of the CCLUO ensure consistency with the EIR.

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 project and minor improvements necessary to bring the operation into compliance with the CCLUO is fully consistent with the impacts identified and adequately mitigated in the Final EIR. The project will result in no significantly adverse environmental effects beyond those identified and mitigated or overriden 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 and Site Plan* for PLN-2020-16633 Avicenna Holdings, LLC
- *Biological Habitat Assessment* prepared by Hohman and Associates, dated August 25, 2020.
- *Wetland Determination Report* prepared by Naiad Biological Consulting dated March 2021
- *Cultural Resource Investigation Report* was prepared by Nick Angeloff, Archaeological Research and Supply Company, dated July 2020.

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.

CONCLUSION

Based on these findings it is concluded that an Addendum to the certified 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.

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)

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. Site 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 site 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 in 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 Operation Plan)

7. Copy of Notice of Intent and Monitoring Self-Certification and other documents filed with the North Coast Regional Water Quality Control Board demonstrating enrollment in Tier 1, 2 or 3, North Coast Regional Water Quality 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. (Attached)

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. (On File)

9. If the source of water is a well, a copy of the County well permit, if available. (Not applicable)

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. For indoor cultivation facilities, identify the source of electrical power and how it will meet with the energy requirements in Section 55.4.8.2.3, and plan for compliance with applicable building codes. (Not applicable)

13. 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)

14. 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)

15. *Biological Habitat Assessment* prepared by Hohman and Associates, dated August 25, 2020. (On file)

16. *Cultural Resource Investigation Report* was prepared by Nick Angeloff, Archaeological Research and Supply Company, dated July 2020. (On file)

17. *Wetland Determination Report* prepared by Naiad Biological Consulting dated March 2021. (Attachment)

Site Management Plan: 7B Ranch
APN: 105-111-007
2004 Conklin Creek Rd, Petrolia, CA 95558
Proposed Cultivation Area: 43,000 sq. ft
Owners:
- 7B Ranch Central LLC (land owner)
- ~~Fox River~~ LLC (Cultivation Company)
Contacts: AVICENNA HOLDINGS, LLC

John Brown
-(650) 608 1298
- jackbrown@gmail.com

Ben Brown
(707) 498 2266

Purpose

This site management plan has been prepared on behalf of the property's Discharger, John Brown and Benjamin Brown, by agreement and in response to the California Water Code Section 13260(a), which requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the appropriate regional water board a Report of Waste Discharge (ROWD) containing such information and data as may be required by the Regional Water Board. (https://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/pdf/160617/Sample_Water_Resource_Protection_Plan.pdf)

Methods

The methods used to develop this site management plan include both field and office components. The office component consisted of reviewing soil maps (Web Soil Survey), and geologic maps (CGS, Geologic Data Map No. 2, 1977). The field component included identifying and accurately mapping all watercourses, wet areas, and wetlands that could be impacted by onsite activities within/on cultivation areas, associated facilities, and all appurtenant roads accessing such areas. An accurate location of the Waters of the State is necessary to make an assessment of whether potential and existing erosion sites/pollution sites have the potential to discharge waste to an area that could affect waters of the State (including groundwater). Next, all cultivation areas, associated facilities, and all appurtenant roads accessing such areas were assessed for discharges and related controllable water quality factors from the activities listed in Order R1-2015-0023, Finding 4a-j. The field assessment also included an evaluation and determination of compliance with the Standard Conditions per Provision 1.8 of Order No. R1-2015-0023. The water resource protection plans required under Tier 2 are meant to describe the specific measures a discharger implements to achieve compliance with standard conditions. Therefore, all required components of the water resource protection plan per Provision 1.8 of Order No. R1-2015-0023 were physically inspected and evaluated. A comprehensive summary of each Standard Condition as it relates to the

subject property is appended (https://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/pdf/160617/Sample_Water_Resource_Protection_Plan.pdf).

Farming Plan

Cultivation will take place on an acre of flat ground in a former hay field. The site will be fenced with deer fencing and a swath of ground around the fenced area will be tilled to suppress gophers and other underground pests. Within the fenced area, rows will be laid out and holes two feet in diameter will be augured to a depth of two feet at regular intervals. Metal fence posts will be inserted into the ground at regular intervals along the resulting rows, defining walking aisles two feet wide. Smooth wire will be strung between the fence posts, enabling cultivators to control the plant canopies and row spacing, ensuring an exactly 43,000 sq ft maximum canopy coverage.

The soil will be amended and returned to the holes, and at plant-up time, the plants will be put in the holes and watered to encourage rooting. As the plants grow, netting will be deployed across the rows between the posts to further direct plant canopy shape and orientation.

Weed control and moisture retention for the cultivated area will be accomplished with bales of rye straw grown on the ranch, possibly supplemented with purchased bales of rice straw.

At harvest time, smooth wire and netting, as well as irrigation materials, will be removed and stored for the following season. Fencing and posts will remain in the field year-round.

Water Management:

The proposed cultivation resides in a historical flood plain along the Mattole River. This flood plain is a prime candidate for dry farming techniques given the relatively high-water table and temperate weather of the location. Water will be irrigated using drip emitters and hand watering in the first 3 weeks of cultivation after planting up around May 20th. At this point in the year, residual moisture from rainfall and the high-water table will aid the plants in tapping natural sources of water. As summer heat and weather continues, the plants will follow the moisture downwards, tapping into a consistent supply of water that will negate the need for further irrigation. We anticipate using 35,000 gallons of water in the first 3-4 weeks (rain and weather dependent), an average of half a gallon per plant per day, at which point the plants will be weaned off. From this point onward, no more irrigation will be required.

The water used will be derived from eleven 4700-gallon rainwater storage tanks. These tanks will be gutter tied to the nearby 5,000 square foot steel barn, where filling them will be much more reliable during the winter months; in a typical winter, the roof of the barn drains more than 250,000 gallons of water. A water meter will be implemented on the outport of the tanks where it leads into a water pump. The tanks will rest on flat land adjacent to the barn. The tanks will not be located near any water courses and pose no threat of run-off or erosion to the surrounding area.

Waste Management:

Plant Waste : All leaf, stem and other cannabis byproduct material will be weighed and deposited in a designated fenced-off compost area. This area is adjacent to the proposed cultivation in a flat zone. Weed barrier will be put down and wattles will be used to help contain the cannabis waste. Cannabis stems at the end of the season will be chipped in a chipper and deposited into our designated compost area adjacent to the cultivation.

Trash will be limited due to the 'natural' style of cultivation, which utilizes mostly native soil and some amending with bulk soil conditioners (cow manure, azomite, mycorrhizae). No perlite will be in the soil mix – should a porosity-based soil builder be required, we will opt for ¼' lava rock, although at this time we don't believe we will need it.

The proposed cultivation will be owner-operated. Should outside employment firms be employed for 'work pushes' in the field, we will utilize one of the various temp agencies in the area. Human waste will be confined to portable toilets and portable wash stations provided by Six Rivers/B&B Waste Company. Our grow manager has been utilizing these services the last two years at another site he manages, (see attached receipts) and intends to continue using these services.

Any trash accumulated from the cultivation will end up in one of three waste bins located in and around the proposed cultivation. Once these bins are full, they will be emptied into one of our enclosed dump trailers, which will ultimately be brought to Eureka Waste Facility.

Spill kits will be located at the cultivation site, as well as the dry barn where any pesticides or fertilizers could be stored. In the event of a spill, a 5-gallon spill kit will be easily accessible.

Soils Management:
Outside 'soil' usage will be limited primarily to our immature plants. These soils will come from one of the various soil production companies in town (likely Soilscape Solutions) and will be delivered in one-cubic yard white totes (perlite-free mix). The soil will be mixed and filled atop weed barrier located within the proposed cultivation zone. Our cultivation will transplant clones into two-gallon pots, at which point in spring (May 20th) they will then be transplanted into the native soil.

Any cow manure or soil conditioners brought on-site will be off-loaded into an area surrounded by wattles. These piles will remain covered with a plastic tarp until they are ready for use. Due to the flat landscape with almost no slope, it is unlikely soils of any kind will leach out from the cultivation. Should any issues arise, we will use wattles and monitor the situation. The perimeter of the cultivation will have a fence that we can affix wattles to should the need arise (unlikely).

The native soil in the proposed cultivation is sandy-loam. It is prime agricultural soil that has been fertilized for decades via livestock (cows and some sheep). It is rich and will likely be an ideal medium for the plants in the proposed site. The proposed cultivation will be cultivated in an old flood plain, ideal for agricultural purposes. The area is demarcated as prime agricultural soils.

Compost Management:
Compost waste from the cultivation will be put into the designated compost area adjacent to the cultivation area. This area will have a weed barrier beneath it and a fence surrounding its perimeter. This area will remain locked at all times and clearly demarcated with signage.

Erosion Control and Road Maintenance:
The proposed cultivation area and drying barn are located entirely in a flat plain along the river; however the property on which the cultivation takes place does include hilly and wooded areas outside of the cultivation area. Erosion control will be implemented via the owners and any outside contractors with credentials to implement necessary work. Erosion from the roads on the property will be the prime focus.

Hohmann and Associates have completed a comprehensive road assessment (see attached) for the property, indicating areas where culverts need to be upsized and some erosion control features

should be implemented. They have also given a comprehensive plan on how to maintain and monitor the road and points of interest to monitor. We will be working with Fish and Wildlife, as well as an outside consultant to address these issues and work to carefully resolve them. No major erosion issues were cited in the report. Primary work included multiple roll dips, addition of rock to various parts of the road, and replacing culverts in several locations on a jeep trail which circles the less accessible mountainous portion of the property(unrelated to cultivation area). No work was required in or around the proposed new cultivation.

Before and after this work is completed, we will continually monitor the road situation to ensure erosion issues do not begin. Every year at the beginning of fall and in winter and spring, we will monitor culverts, ditches and road conditions. These will be noted in a log and any repairs needed will be done by one of the local equipment operators/contractors. Should any extensive repairs be needed, we will consult Fish and Wildlife as well as Hohmann and Associates for additional support.

The roads entering and exiting the cultivation will use a pre-existing short driveway and gate from Conklin Creek Road. The driveway of about 30 feet leads to the main parking area in front of the barn, and thence continues another hundred feet past the barn to the cultivation area. There are no water features, wetlands, or any other issues that this driveway might interfere with. A complete Biological Assessment was conducted for the proposed cultivation and will be attached to this report.

Parking will be confined to the parking lot directly in front of the barn, a graveled and rocked-in space. These parking locations will be primarily used in the event of employees working during the busiest times of year. These workers will come through one of the various temp agencies or we will hire internally.

Biological Monitoring:
A biological assessment and invasive species report were provided by Hohman Associates. Their report indicated there are no wetland areas, sensitive species or risks to the native fauna and flora via the proposed cultivation. See the report attached to this document.

The proposed cultivation will not utilize any lights, generators or structures other than the drying barn. It will be minimally invasive and pose no threat to the wildlife in the area.

Pesticide and fertilizer storage:

Pesticides will be stored in the new dry building. Pesticide use will generally be limited to the nursery stage when the plants are young. We will only be using the following organic products: **Plant Therapy**, a residue free, minimum risk natural pesticide, **Botaniguard 22WP Bacterial Spray**, an organic pesticide derived from a naturally occurring fungus, **Zerotol 2.0**, an organic fungicide, bacterial and algicide, and **sulphur powder**.

Fertilizers will be limited to some amending of the native soil. These soil amendments will come from one of the local soil companies and will be entirely organic.

Secure Storage:

Secure product storage will occur in the on-site steel barn, which is easy to keep locked and maintain a safe storage for all dried product.

Fire Safety and Prevention:
Fire extinguishers will be located at the cultivation site and in the dry barn. A CalFire water storage tank will be set up and plumbed in the barn area in case of a fire event.

An emergency action plan indicating exit routes in the event of the fire will be covered with any employees. Standard Operating Procedures in regards to fire safety in and around the work zone will be implemented and strictly adhered to.

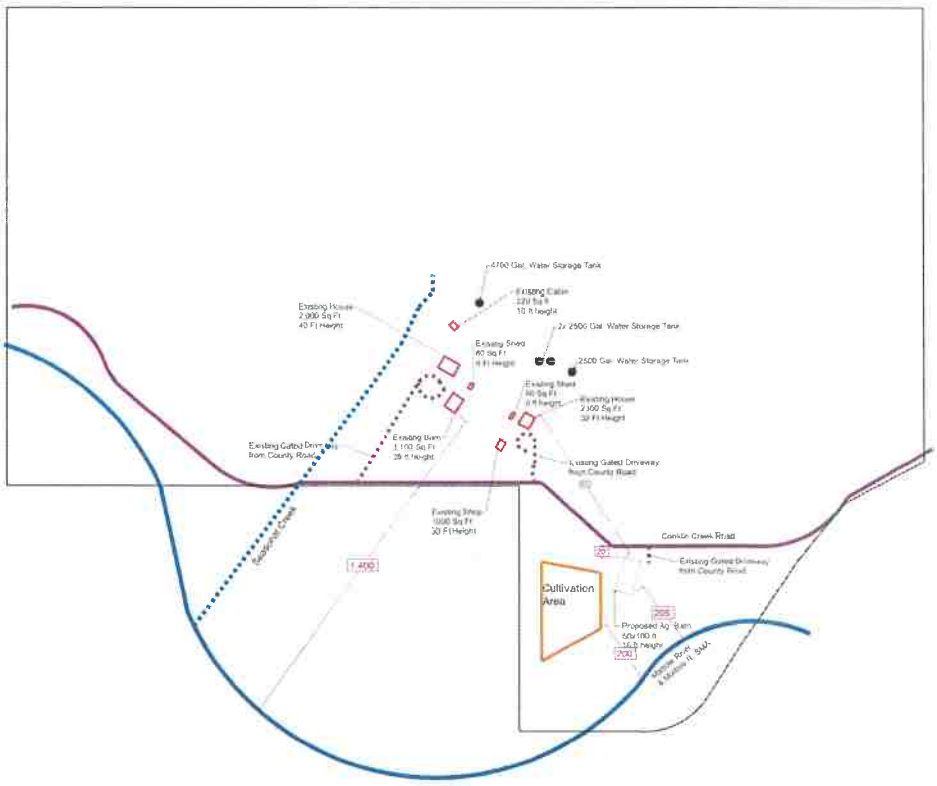
Maps

Map 1.

The following map shows the locations of the proposed cultivation area in regards to the 100 year flood plain. A 100 year flood event would not reach the proposed cultivation area.

MAP 2.
Parcel Plan, not to scale:

John Brown and
Benjamin Brown
Parcel Map
Showing Existing and
Proposed Structures
APN 105-111-007
707-498-2266
NOT TO SCALE



Material Safety Data Sheets:
Please see Appendix for MSDSs for our pesticides.

Proposed Cultivation Operation Plan:
APN 105 111 007
Operating Entity: Fox River LLC Land owner(s):
7B Ranch Central LLC
- John Brown (650) 608-1298
- Benjamin Brown (707) 498-2266
Address: 2004 Conklin Creek Road, Petrolia CA 95558

The cultivation encompasses a 43,000 sq. ft square foot area in the pasture located at the southeast portion of the property. The field has historically been used as a pasture for cows and sheep. Livestock would remain in the field, except for the fenced off area of about 1.3 acres. The area will be no less than 200' from the riverbank, exceeding the setback standards required from a class 1 stream. The cannabis cultivation will utilize dry farming techniques, in which the juvenile plants are put in the ground and grown with minimal watering during the majority of their lives,

approximately 1/2 gallon per week, all from rain catch. (See: https://cannabisnow.com/watch-dry-farming-cannabis/).

Eleven 4700 gallon rain-catch tanks will be set next to the barn. This is the water that will be utilized to irrigate the plants as needed in the native ground. The native soil will be lightly amended with organic inputs and conditioners, such including fresh mushroom compost, azomite, rinsed and screened organic cow manure from the Vevoda Ferndale dairy, dolomite, and ultimately topped with a mulch layer, most likely derived from rye and rice straw. The native soil will be augured up, amended and tilled in early spring, a week before transplant into the ground around approximately June 1st. Once established, the plants will be stabilized using soft trellis netting .

Between mid-September to mid-October, harvests will commence, the field will be cut and transported to a metal drying barn (on-site) for drying. This drying barn is proposed to be built and will be 5000 sqft. We plan to grow a couple of different strains that finish at different times in the fall to help mitigate the over-flow of cannabis material at any one time in the dry facility. Upon its completed dry, the material will be bucked, put into totes, tagged and await trimming at an offsite processing facility, or will be sold as whole plant biomass, depending on its quality and the market rate at the given time.

Almost all labor for this project will be carried out by the five owner-operators of Fox River LLC. At three stages during the annual cultivation we expect to hire approximately 5 to 7 additional hands on a temporary basis, for less than a week in each case.

Any extra labor component associated with this project will come from one of the various third party labor contract groups now in existence in Humboldt County. Their help will mostly occur during the transplant at the end of May/Beginning of June, leafing in August, and at harvest during the fall. Once harvested, the field will be cover cropped and left fallow until the early spring of the following season.

Operations Plan:

Total Plant Count: Approximately 3300 (each plant is roughly 6 feet on center)
- Plants will either be started from seed or purchased from an off-site licensed nursery.

April 15th: Purchase clones or start seeds in the nursery. Tag each plant with METRC tags and log into system.

May: Continue growing the starts and keeping them clean using organic sprays and IPM techniques. Sprays include, Beauvarria Bassiana bacteria, and Plant Therapy Oil based spray.
- Amend the native soil with an organic mix after auguring and tilling the field.

June 1st: Transplant plants into the field. Water the first 1-2 weeks with the water stored via the rain catch tanks.
- Watch for predation from animals and monitor overall plant health
- Stake each plant with bamboo for aid in windy conditions.
- Mulch around each of the fresh transplants with rice straw

July: Continue monitoring plant health. Commence early leafing and vegetation removal on the plants. Add more bamboo and stakes as needed.

August: Continue leafing and pruning.

September: Begin preparing for harvest. Harvest the earliest finishing strains. After harvest and dry, these plants are bucked down into totes to be sold to a compliant off-site processor or distributor. Stalks are chipped into the compliant, designated compost area on-site just outside of the cultivation area.

October: Continue harvesting the remaining cannabis in the field. After harvest and dry, these plants are bucked down into totes to be sold to a compliant off-site processor or distributor. Stalks are chipped into the compliant, designated compost area on-site just outside of the cultivation area.

November: Open the field up to cows in the front pasture.

December: Field remains fallow while cover crop is growing. January: Field remains fallow while cover crop is growing February: Field remains fallow while cover crop is growing March: Field remains fallow while cover crop is growing

Water Usage:
- Water usage will all be from rain catch. The amount will be approximately 1/2 gal per plant per week from the rain tanks. Total water usage will be 35,000 to 50,000 gal over 32.2 weeks May 15 to Oct 1. Total irrigation water storage on site will total at least 51,000 gallons.

Water Source:
- The water will be derived from rain tanks. Eleven 4700 gallon self catching tanks will be connected to gutters of the barn. See map for further details.

Products to be used in Cultivation:

Amendments:
- Oyster shell
- Azomite
-Dolomite
-Rye Straw
- Rice straw
- Organic dairy cow manure, rinsed and screened
- Mushroom compost

Fungicides and Pesticides: To be used during the nursery/early life stages of the plants (April/May).
- Plant Therapy-Oil Based Spray
- Beauvaria Bassiana-Bacterial Spray
Zerotol – Algicide
Sulphur powder

Description of Drainage: Drainage issues are easily mitigated on this cultivation site due to its almost 0% slope and our low-use watering/feeding practices. All the plants are on flat surfaces, and sit atop prime Ag soil with high moisture retaining capacity. To control erosion, we will use only the preexisting roads to and from the cultivation site, we won't remove the surrounding trees,

and will not grow on any zones of the property on a slope. Wattles will be used around any soil/compost piles.

Farm Products: All farm inputs such a fertilizers, pesticides and fuel will be stored in the agricultural barn used for drying the cannabis on-site.

Processing Plan: All cannabis will be dried on-site in the agricultural drying building. Once dry it will be bucked into totes to be picked up by an off-site processing company/distributor. In the event we get a self-transport license, we may bring it to the distributors or processors ourselves.

Security Plan: Motion sensors and an alarm system will be installed at the drying barn. Trail cameras will be installed around the cultivation area and at entry/exit points. A Dakota Alert buried metal detecting probe sensor will be installed under the driveway to detect vehicles entering or exiting the site in non-working hours.

Power Source: Power for the cultivation activities will be derived from a PG&E agricultural power service. The power will all be from renewables as we will pay into PG&Es renewable credits service. The water pump used for the immature plants will be solar powered.

During the first month after transplant (late May/early June) irrigation from the rain tanks will take place. Power for the irrigation will come from a solar pump set up directly next to the tanks.

Cannabis Pest and Waste Management Plans:

PEST MANAGEMENT:

Biological Pest Management: We plan to use predator mites in our nursery area after spraying Plant Therapy.. Pests problems have been very limited in our grow manager's other cultivations in the area and are usually easy to mitigate in outdoor cultivation environments.

Chemical Pest-Management Methods: To control pests and fungus/mildews with chemicals, we use only the following products; Plant Therapy, beauvarria Bassiana bacteria (Botaniguard), Zerotol and Sulphur powder. All are made with entirely benign, compliant, organic ingredients, and are used in the vegetative phase of the growth cycle. These products in conjunction with each other have proved to be very effective in eliminating and/or preventing the on-set and growth of pest and fungal issues. When not in use they are stored in our agricultural building.

PRODUCTS USED:
1) Lost Coast Plant Therapy: Ingredients are as follows: Soybean oil, citric acid, isopropyl alcohol, peppermint oil.
2) Botaniguard 22wp: Beauvarria Bassiana Spray
3) Zerotol: a solution of Hydrogen Peroxide and Peroxyacetic Acid
4) Sulphur Powder

WASTE MANAGEMENT:

Our farm prides itself on being a low-waste, low energy farm. The waste we produce varies between the following:
1) Compost/plant material

2) Food/kitchen/organic waste
3) Garbage
4) Recycling
5) Domestic Sewage

Compost refers to a multitude of items; mostly cow manure used in our soil making process (not wasted) and stalks and root balls from the plants that were harvested on the premises. These stalks and root balls are chipped and heaped into a pile. On the premise map you can see where we do our composting activities.

Garbage: All garbage that's not recyclable, associated with the cultivation and residence, is taken into town with our trailer and dropped off at a fully permitted solid waste landfill/transformation facility in Eureka. Trips to the Eureka facility occur on average every
2-3 weeks. Before being hauled away, all garbage is stored on-site in trash containers. When containers become full, they are re-located to the back of our trailer, which is fully enclosed and safe from animals and wildlife.

Recycling: We actively recycle as much waste as we can from our farm. We try strongly to reduce our consumption of new products by making what we can from our existing resources and re-using/repurposing equipment. Recycling of material does also happens off-site at the same facility in Eureka where our garbage waste goes. The recycling is pre-separated and stored in garbage containers until it is ready to be taken away.

Domestic Sewage: This will be handled via portable toilet "porta-potty" contracted services provided by Six Rivers.

Employees:
Employees will come via one of the local temp agencies in who outsource workers for farms. The cultivation requires minimal inputs and will be largely owner-operated via the five Fox River LLC co-owners. A tractor will be utilized for much of the early season dirt work and tilling in amendments. Up to seven workers will be hired for transplant pushes, leafing and the fall harvest and hanging. The product will be sold to an offsite distribution/processing facility after drying.

Employee parking facilities exist on-site. Portable bathrooms and wash stations will be located at the cultivation site and at the drying barn.

Drying/Processing:
Drying will take place in the proposed dry-shed/barn 5,000 sqft The power will all be derived from PG&E agricultural power service and will be off-set with renewable energy credits. A floor plan has been drafted and we are working to get the new building permitted and built before 2021. The area of the building is flat land adjacent to the cultivation site. There is zero slope and it is out of the flood plain.

Stormwater Management Plan
The site has been evaluated by a licensed forester as part of preparation of an on-site roads assessment and LSAA. This operation will remediate several legacy impacts unrelated to the proposed cultivation activity. The project will overall reduce sediment delivery and will benefit the watershed.

The proposed cultivation operation is sited on existing agricultural land on a slope of 0-2% with a 200'+ natural vegetated buffer between the river and the operations which will mitigate any minor run-off. Native soils will be cover cropped and strawed over winter to further reduce sediment delivery and increase soil fertility.

Invasive Species Control Plan
As noted by the biological assessment, the field generally consists of non-native grasses as part of historical agricultural activities. These grasses will be removed and displaced with the proposed cultivation activities

Operations will utilize the following methods to minimize introduction of other invasive species:

1. Utilizing straw instead of hay to prevent introduction of non-native grasses. The majority of the straw utilized for erosion control and weed control for the operation will be sourced from adjacent fields.
2. Staff will be provided a copy of the Invasive Plant Council handout for invasive plants of Humboldt County. Any sightings of invasive plants will be reported and actions will be taken as recommended to manage them:
https://www.cal-ipc.org/docs/WMAs/pdf/HWMA%20Inv%20Plants%20091014.pdf

Hazardous Waste Statement
Oil changes for equipment are performed off-site.

Total quantities of hazardous materials (organic pesticides, nutrients, etc) will be less than 55 gallons or 500 pounds.

Parking Plan
See Plot Plan for parking locations.

Energy Plan
Power to be provided by PGE/grid service and will utilize the renewable energy rate. No generators.

Noise Source Assessments and Mitigation Plan
Cultivation occurs outdoors with no fans, lights or generator use proposed.

Drying facility will be powered by PGE grid service. No on-going noise impact will be generated by the proposed operations

Light Pollution Control Plan
Supplemental lighting will be utilized in nurseries from April 15th to May 15th. Lights will be utilized for 1-4 hours per day depending on cloudiness to ensure plants do not "flip" into a flowering state. When lights are utilized between nighttime hours between dusk and dawn, blackout tarp will be pulled over the nursery to ensure no light escapes. The operation will comply with International Dark Sky Standards.

Water Availability Analysis
SL Consulting Services Inc
APN 105-111-007, 105-121-003

An estimated 5,000 square feet of rain catchment roof area from the barn will be guttered into a rain storage tank system.

An estimated 100 to 120 inches of rainfal falls over the region on an annual basis.

5000 square feet * 100 inches * 1 foot / 12 inches * 7.48 gallons / cubic foot = 311,667 gallons collected per average year

More than adequate roof area is being proposed to fill the proposed tank system

SWRCB Compliance Status
SL Consulting Services Inc
APN 105-111-007, 105-121-003

To be compliant with SWRCB, the following items must be addressed:

1. Develop barn or other covered storage i.e. shed or job box to store agricultural chemicals
2. Provide portable toliet for employees
3. Address LSAA 1600 projects as notified and reviewed with CDFW
4. Address road maintenance points as identified by the roads assessment

Hohman & Associates
FORESTRY CONSULTANTS
P.O. Box 733, Hydesville, CA 95547 . (707) 768-3743 . (707) 768-3747 fax

Work Order

RP-1: Existing 24" diameter culvert on a class III watercourse. Culvert is functioning and adequately sized.

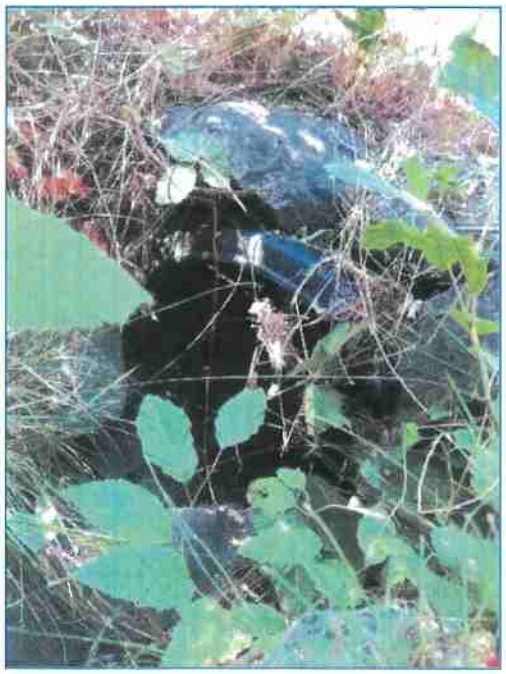
Recommendation: Add ½ yard of 6" to 18" diameter sharp angular rock to the inlet and outlet. Install critical dip 50' right of hinge line and line with 2 yards of 4" to 6" diameter rock.

RP-1 Inlet

RP-1 Outlet

RP-2: Existing 24" diameter culvert on a class III watercourse. Culvert is functioning and adequately sized.

Recommendation: Add ½ yard of 6" to 18" diameter sharp angular rock to the inlet and outlet. Install critical dip 50' right of hinge line and line with 2 yards of 4" to 6" diameter rock.



RP-2 Inlet

RP-2 Outlet

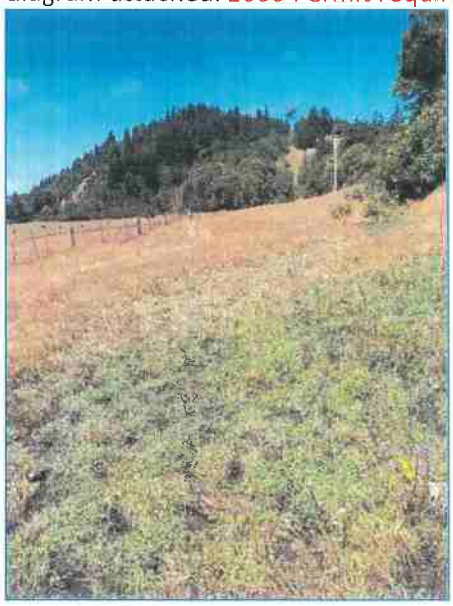
RP-5: Existing dirt ford on a class II watercourse.

Recommendation: Install a broad 16' wide wet ford crossing. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10-12 cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 8-12 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards). See diagram attached. 1600 Permit required.

RP-5 Dirt ford crossing

RP-6: Existing dirt ford draining a class II spring.

Recommendation: Install a 12' wide wet ford crossing draining away from the pond and directed into the field. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10+ cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 8-10 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards). See diagram attached. 1600 Permit required.



RP-6: Dirt ford crossing

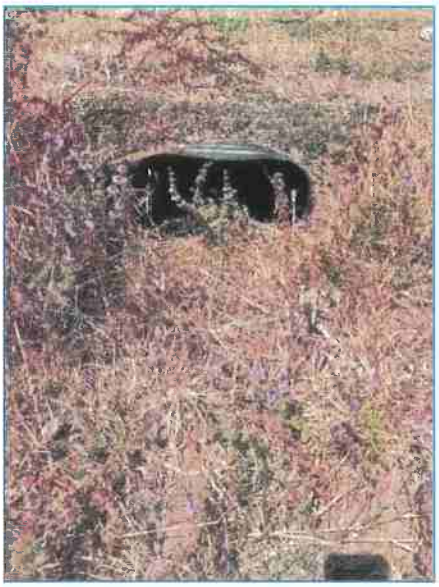
RP-6.5: Existing dirt ford draining a class II spring.

Recommendation: Install a 12' wide wet ford crossing draining into the field. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10+ cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 8-10 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards). See diagram attached. 1600 Permit required.

RP-6.5 Dirt ford crossing

RP-7: Existing undersized 18" diameter culvert draining a class III watercourse.

Recommendation: Excavate culvert and install a 12' wide wet ford crossing draining into the field. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10+ cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 8-10 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards). Please note that the adjacent crossing is also a rocked ford with the approaches less than 10' apart. See diagram attached. 1600 Permit required.



RP-7 Inlet

RP-7 Outlet

RP-8: Existing undersized 24" diameter culvert draining a class II watercourse.

Recommendation: Excavate culvert and install a 12' wide wet ford crossing draining into the field. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10+ cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 8-10 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards). See diagram attached. 1600 Permit required.

RP-8 Inlet

RP-8 Outlet

RP-9: Existing 32" diameter culvert on a class II watercourse. Culvert is functioning and adequately sized.

Recommendation: Add 2 yards of 6" to 18" diameter sharp angular rock to the right branch of a class III draining to the inlet (looking up hill) to reduce nick point erosion. Install critical dip center of hinge line and line with 8 yards of 4" to 6" diameter rock. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (12 Yards).

RP-9 Inlet

RP-9 Outlet

RP-10: Existing undersized 24" diameter culvert on a class III watercourse. Culvert is undersized but is functioning.

Recommendation: Replace with a 60" diameter culvert 50' long to grade. Install 9 yards of 12" to 18" diameter sharp angular rock at the inlet and outlet. Install critical dip on center of hinge line and line with 15 yards of 4" to 6" diameter rock. Install rolling dip 50' left of crossing. Rock all remaining road prism within 50' of the watercourse with 1"+/- sharp angular road base (15 Yards). 1600 permit required.

RP-10 Inlet

RP-10 Outlet

RP-11: Surface drainage present, appears to be past erosion channel.

Recommendation: Install a rolling dip to catch surface drainage and line dip with 2 yards of 4" to 6" diameter rock.

RP-11 Surface drainage, install rolling dip

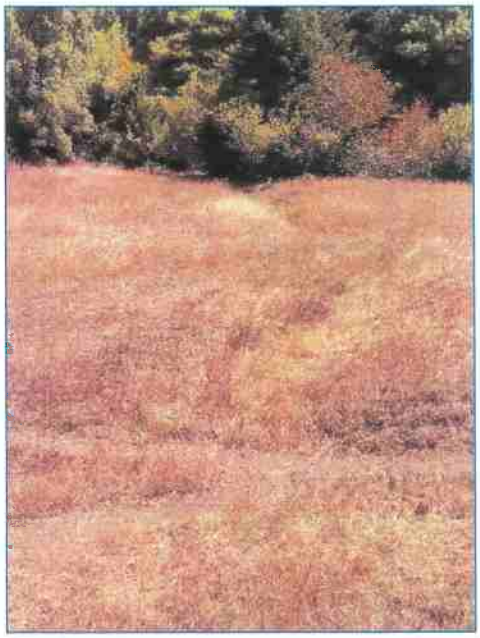
RP-12: Existing dirt ford draining a class II spring.

Recommendation: Install a 12' wide wet ford crossing draining within the bermed channel into the field. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Line the road prism with 10+ cu yards of 6" to 12" diameter rock 12" deep, for 25' left and right of the hinge line. Install 6-8 cu yards of 6" to 18" diameter rock on the outfall of the road prism. Rock all remaining road prism within 100' of the watercourse with 1"+/- sharp angular road base (10 Yards). See diagram attached. 1600 Permit required.

RP-12 Class II spring drainage

RP-13: Surface drainage present, appears to be past erosion channel.

Recommendation: Install a rolling dip to catch surface drainage and line dip with 2 yards of 4" to 6" diameter rock.



RP-13 surface drainage, install rolling dip

RP-14: Existing dirt ford draining a class III watercourse.

Recommendation: Install a 12' wide dry ford crossing. Develop the road prism in the crossing to maintain a 3% to 5% outslope. Install 6-8 cu yards of 6" to 18" diameter rock on the outfall /apron of the road prism. Rock all remaining road prism within 50' of the watercourse with 1"+/- sharp angular road base (8 Yards). See diagram attached. 1600 Permit required.

RP-14 Dirt ford seep area

RP-15: Existing dirt ford draining a class III watercourse.

Recommendation: Replace with a 24" diameter culvert 40' long to grade. Install 2 yards of 6" to 18" diameter sharp angular rock at the inlet and outlet. Install critical dip center of hinge line and line with 6 yards of 4" to 6" diameter rock. Rock all remaining road prism within 50' of the watercourse with 1"+/- sharp angular road base (8 Yards). 1600 permit required.

RP-15 Dirt ford drainage

RP-16: Existing failed 18" diameter culvert draining a class III watercourse.

Recommendation: Replace with a 24" diameter culvert 40' long to grade. Install 2 yards of 6" to 18" diameter sharp angular rock at the inlet and outlet. Install critical dip center of hinge line and line with 6 yards of 4" to 6" diameter rock. Install rolling dip 50' left of crossing. Rock all remaining road prism within 50' of the watercourse with 1"+/- sharp angular road base (8 Yards). 1600 permit required.

RP-17: Existing dirt ford draining a class III watercourse.

Recommendation: Replace with a 24" diameter culvert 40' long to grade. Install 2 yards of 6" to 18" diameter sharp angular rock at the inlet and outlet. Install critical dip 50' right of hinge line and line with 6 yards of 4" to 6" diameter rock. Install rolling dip 50' left of crossing. Rock all remaining road prism within 50' of the watercourse with 1"+/- sharp angular road base (8 Yards). 1600 permit required.

RP-17 Dirt ford crossing

RP-17 Cl III drainage

NOAA Atlas 14, Volume 6, Version 2
Location name: Petrolia, California, USA*
Latitude: 40.3091°, Longitude: -124.2496°
Elevation: 209.87 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	2.33 (2.05-2.68)	2.81 (2.47-3.22)	3.40 (2.99-3.91)	3.86 (3.36-4.49)	4.49 (3.76-5.41)	4.94 (4.06-6.11)	5.41 (4.31-6.85)	5.87 (4.54-7.68)	6.48 (4.78-8.87)	6.94 (4.93-9.86)
10-min	1.67 (1.48-1.91)	2.01 (1.77-2.30)	2.44 (2.14-2.80)	2.77 (2.41-3.22)	3.22 (2.69-3.88)	3.55 (2.90-4.37)	3.88 (3.09-4.91)	4.21 (3.25-5.50)	4.64 (3.43-6.35)	4.97 (3.53-7.07)
15-min	1.35 (1.19-1.54)	1.62 (1.42-1.86)	1.96 (1.72-2.26)	2.24 (1.94-2.59)	2.59 (2.17-3.12)	2.86 (2.34-3.53)	3.12 (2.49-3.96)	3.39 (2.62-4.44)	3.74 (2.76-5.12)	4.01 (2.85-5.70)
30-min	0.908 (0.802-1.04)	1.09 (0.962-1.25)	1.32 (1.16-1.52)	1.51 (1.31-1.75)	1.75 (1.47-2.11)	1.93 (1.58-2.38)	2.11 (1.68-2.67)	2.29 (1.77-2.99)	2.52 (1.86-3.45)	2.70 (1.92-3.84)
60-min	0.639 (0.564-0.732)	0.767 (0.676-0.880)	0.930 (0.817-1.07)	1.06 (0.921-1.23)	1.23 (1.03-1.48)	1.36 (1.11-1.67)	1.48 (1.18-1.88)	1.61 (1.24-2.10)	1.77 (1.31-2.43)	1.90 (1.35-2.70)
2-hr	0.506 (0.446-0.580)	0.608 (0.536-0.698)	0.738 (0.648-0.849)	0.840 (0.731-0.975)	0.974 (0.816-1.17)	1.07 (0.880-1.32)	1.17 (0.934-1.49)	1.27 (0.982-1.66)	1.40 (1.03-1.92)	1.50 (1.06-2.13)
3-hr	0.458 (0.403-0.524)	0.549 (0.484-0.630)	0.665 (0.584-0.765)	0.756 (0.658-0.877)	0.875 (0.734-1.06)	0.963 (0.789-1.19)	1.05 (0.837-1.33)	1.14 (0.879-1.49)	1.25 (0.923-1.71)	1.34 (0.949-1.90)
6-hr	0.372 (0.328-0.426)	0.445 (0.392-0.511)	0.537 (0.472-0.618)	0.610 (0.530-0.708)	0.703 (0.590-0.848)	0.773 (0.633-0.953)	0.840 (0.670-1.07)	0.907 (0.701-1.19)	0.995 (0.734-1.36)	1.06 (0.753-1.51)
12-hr	0.283 (0.250-0.325)	0.340 (0.300-0.390)	0.411 (0.361-0.473)	0.467 (0.406-0.542)	0.538 (0.451-0.649)	0.591 (0.484-0.729)	0.642 (0.512-0.813)	0.692 (0.535-0.905)	0.757 (0.559-1.04)	0.805 (0.572-1.15)
24-hr	0.203 (0.182-0.230)	0.245 (0.220-0.278)	0.297 (0.267-0.338)	0.337 (0.301-0.386)	0.389 (0.337-0.458)	0.426 (0.363-0.510)	0.462 (0.386-0.565)	0.498 (0.406-0.622)	0.543 (0.428-0.703)	0.576 (0.441-0.768)
2-day	0.159 (0.143-0.181)	0.194 (0.174-0.220)	0.236 (0.211-0.268)	0.267 (0.238-0.306)	0.307 (0.267-0.362)	0.336 (0.286-0.402)	0.363 (0.303-0.444)	0.389 (0.318-0.487)	0.423 (0.333-0.547)	0.447 (0.342-0.595)
3-day	0.128 (0.115-0.145)	0.157 (0.141-0.178)	0.191 (0.171-0.217)	0.216 (0.193-0.248)	0.249 (0.216-0.293)	0.271 (0.231-0.325)	0.293 (0.245-0.358)	0.313 (0.256-0.392)	0.339 (0.267-0.439)	0.358 (0.274-0.477)
4-day	0.108 (0.097-0.122)	0.132 (0.119-0.150)	0.162 (0.145-0.184)	0.184 (0.164-0.210)	0.211 (0.183-0.248)	0.230 (0.196-0.275)	0.248 (0.207-0.303)	0.265 (0.216-0.331)	0.286 (0.226-0.371)	0.302 (0.231-0.402)
7-day	0.077 (0.069-0.087)	0.095 (0.085-0.107)	0.116 (0.104-0.132)	0.132 (0.117-0.151)	0.151 (0.131-0.178)	0.164 (0.140-0.197)	0.177 (0.148-0.217)	0.189 (0.154-0.237)	0.204 (0.161-0.265)	0.215 (0.165-0.287)
10-day	0.062 (0.056-0.070)	0.076 (0.069-0.087)	0.093 (0.084-0.106)	0.106 (0.094-0.121)	0.122 (0.105-0.143)	0.132 (0.113-0.159)	0.143 (0.119-0.174)	0.152 (0.124-0.190)	0.164 (0.129-0.212)	0.172 (0.132-0.230)
20-day	0.042 (0.037-0.047)	0.051 (0.046-0.058)	0.063 (0.056-0.071)	0.071 (0.063-0.081)	0.081 (0.070-0.096)	0.088 (0.075-0.106)	0.095 (0.079-0.116)	0.101 (0.082-0.126)	0.108 (0.085-0.140)	0.113 (0.086-0.151)
30-day	0.034 (0.031-0.039)	0.042 (0.038-0.048)	0.052 (0.046-0.059)	0.058 (0.052-0.067)	0.066 (0.058-0.078)	0.072 (0.061-0.086)	0.077 (0.064-0.094)	0.082 (0.067-0.102)	0.087 (0.069-0.113)	0.091 (0.070-0.121)
45-day	0.029 (0.026-0.033)	0.036 (0.032-0.041)	0.043 (0.039-0.049)	0.049 (0.043-0.056)	0.055 (0.048-0.065)	0.059 (0.051-0.071)	0.063 (0.053-0.077)	0.067 (0.055-0.084)	0.071 (0.056-0.092)	0.074 (0.057-0.099)
60-day	0.026 (0.023-0.029)	0.032 (0.028-0.036)	0.038 (0.034-0.043)	0.043 (0.038-0.049)	0.048 (0.042-0.057)	0.052 (0.044-0.062)	0.055 (0.046-0.067)	0.058 (0.047-0.072)	0.061 (0.048-0.079)	0.064 (0.049-0.085)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

Determination of 100-Year Flood Flow

Location: Ben Brown LSAA (1600)

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow (A > 100 acres)

No.	Crossing	Area (acres) A	Basin maximum elevation (ft)*	Crossing elevation (ft)*	Area (mi^2) A	Avg. Annual Precipitation (in/yr) P	Elevation Index (mean basin	100-yr flood flow Q_{100} (cfs) North Coast[1] (NC)	Sierra[2] (S)	North-east[3] (NE)	Central Coast[4] (CC)
1	***RP-10***	66	600	120	0.103	50	360	***59.7***	***83.0***	***60.6***	***79.7***
2	***RP-15***	5	560	460	0.008	50	510	***6.4***	***8.0***	***9.2***	***9.1***
3	***RP-16***	5	560	470	0.008	50	515	***6.4***	***8.0***	***9.2***	***9.1***
4	***RP-17***	5	600	480	0.008	50	540	***6.4***	***7.9***	***9.2***	***9.1***
5											
6											
7											
8											

**To estimate discharges for bridges, use elevations along watercourse at 85 percent and 10 percent of water-course length from crossing to drainage divide, respectively, instead of using maximum and crossing elevations.*

See below for M&F equations

Rational Method for 100-year flood flow (A < 200 acres)

No.	Crossing	$T_c = 60((11.9 \times L^3)/H)^{0.385}$ Channel length (to top of basin) (mi) L	Elevation difference (ft) H	Concentration time (min) Tc	$Q_{100} = CIA$ Runoff coefficient C	100-year Return-Period Precipitation (in/hr) I*	Area (acres) A	100-yr flood flow (cfs) Q100
1	***RP-10***	0.29	480	*3*	0.35	3.88	66	***89.6***
2	***RP-15***	0.05	100	*1*	0.35	3.88	5	***6.8***
3	***RP-16***	0.05	90	*1*	0.35	3.88	5	***6.8***
4	***RP-17***	0.05	120	*1*	0.35	3.88	5	***6.8***
5								
6								
7								
8								

**Use 100-yr precipitation of duration similar to Tc or for 10 min, whichever is larger; convert to in/hr for input as "I"*

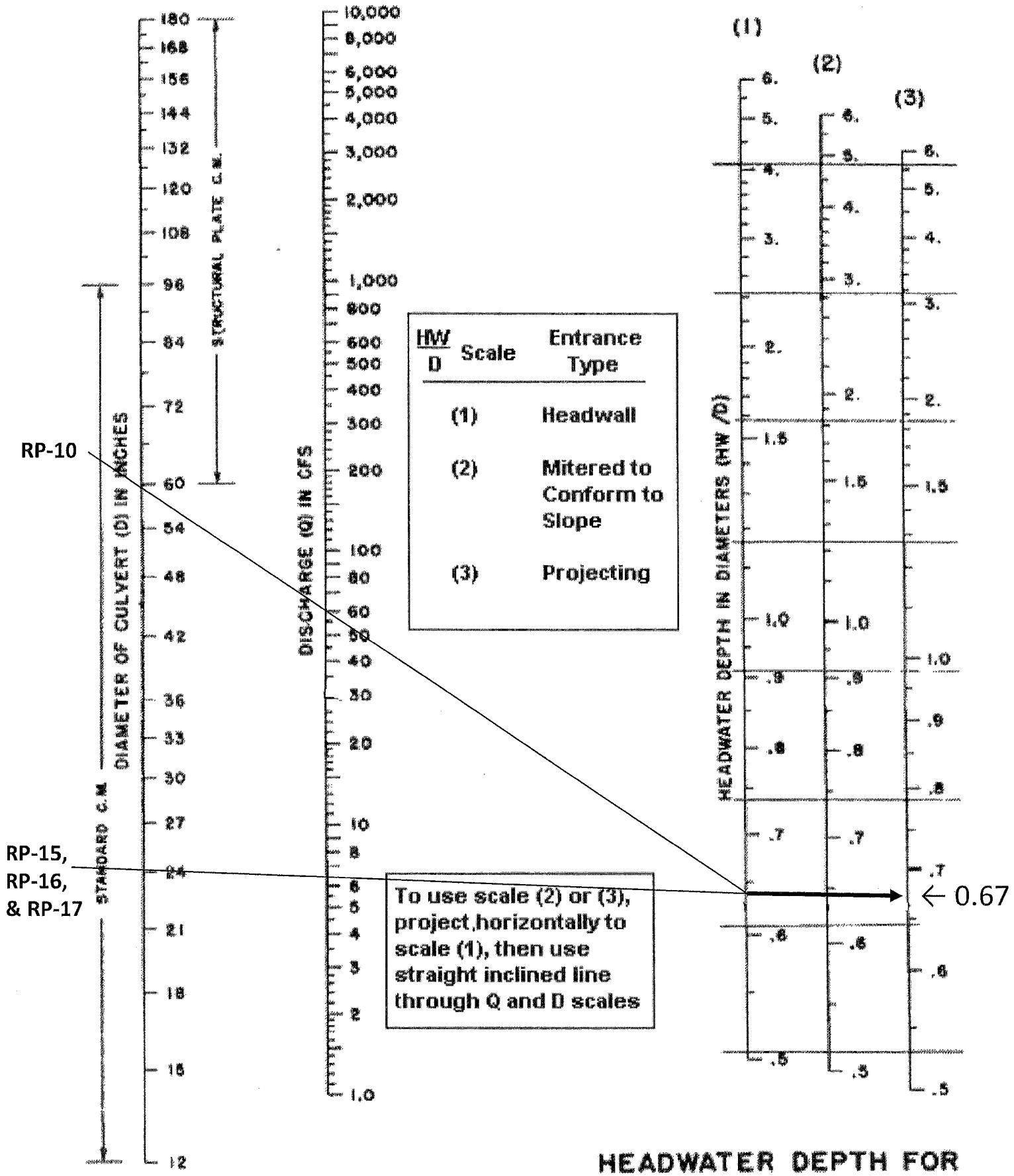
Magnitude & Frequency Q_{100} equations

NC (1) $Q_{100} = 48.5(A)^{0.865}(P)^{0.556}$

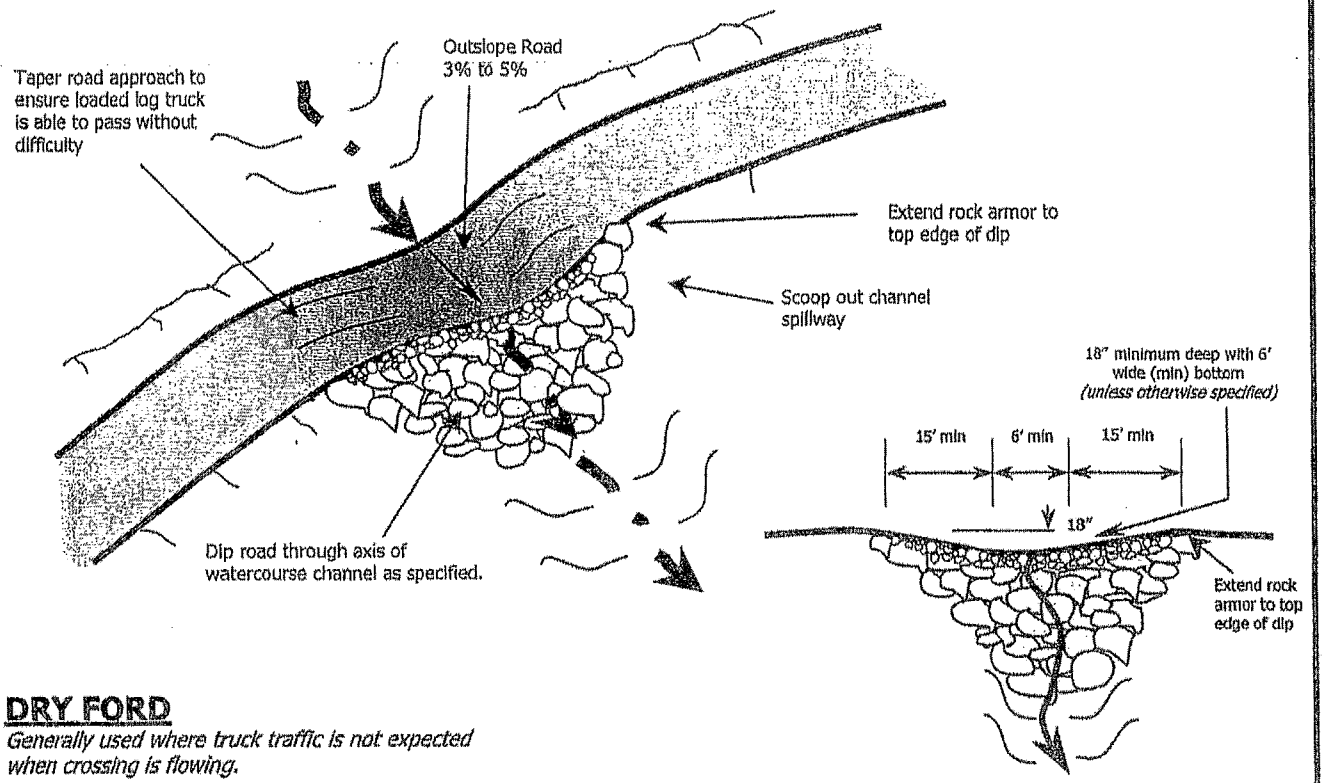
S (2) $Q_{100} = 20.6(A)^{0.[illegible]}(P)^{1.24}(H)^{-0.[illegible]}$

NE (3) $Q_{100} = 0.713(A)^{0.729}(P)^{1.56}$

CC (4) $Q_{100} = 11.0(A)^{0.84}(P)^{0.994}$

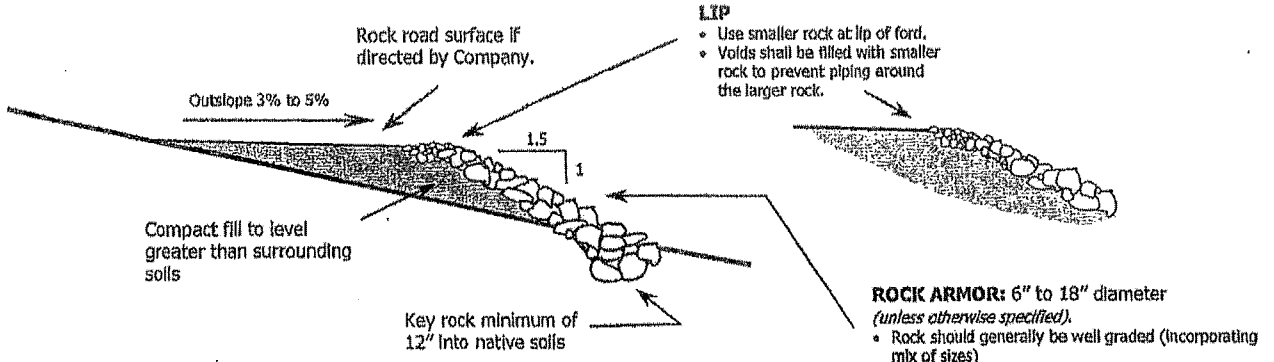


HEADWATER DEPTH FOR C. M. PIPE CULVERTS WITH INLET CONTROL



DRY FORD

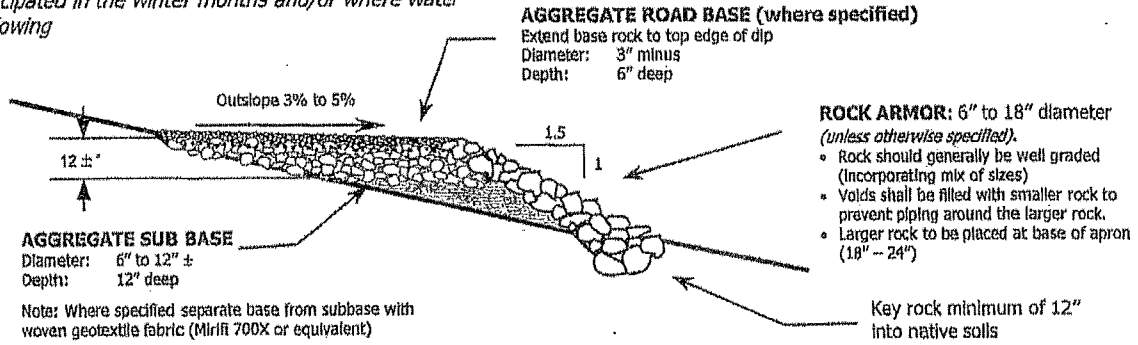
Generally used where truck traffic is not expected when crossing is flowing.



ROCK ARMOR: 6" to 18" diameter
(unless otherwise specified).
- Rock should generally be well graded (incorporating mix of sizes)
- Voids shall be filled with smaller rock to prevent piping around the larger rock.
- Larger rock to be placed at base of apron (18" – 24")

WET FORD

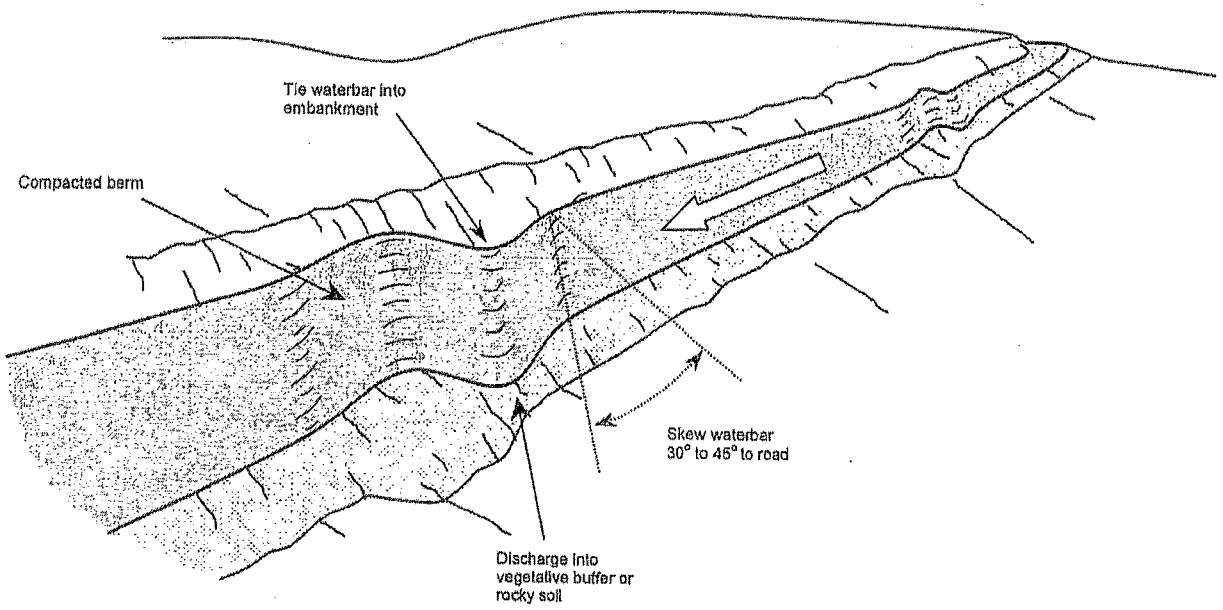
Generally used where 4x4 pickup traffic is anticipated in the winter months and/or where water is flowing

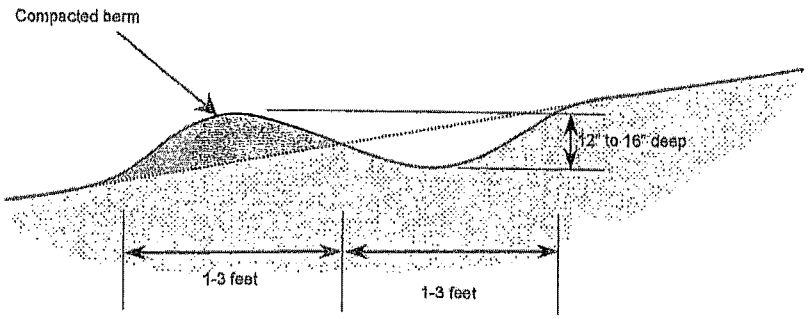


ROCK ARMOR: 6" to 18" diameter
(unless otherwise specified).
- Rock should generally be well graded (incorporating mix of sizes)
- Voids shall be filled with smaller rock to prevent piping around the larger rock.
- Larger rock to be placed at base of apron (18" – 24")

NOTE
- Details are typical and intended for use as a guideline. Adjustments to the actual design may need to occur in field during time of construction due to local site conditions.
- Refer to THP for specific design criteria where applicable.

PLN-2020-16633 Avicenna Holdings, LLC	**WET AND DRY FORD STANDARD PLANS**	Standard Detail
		Page 50 of 119





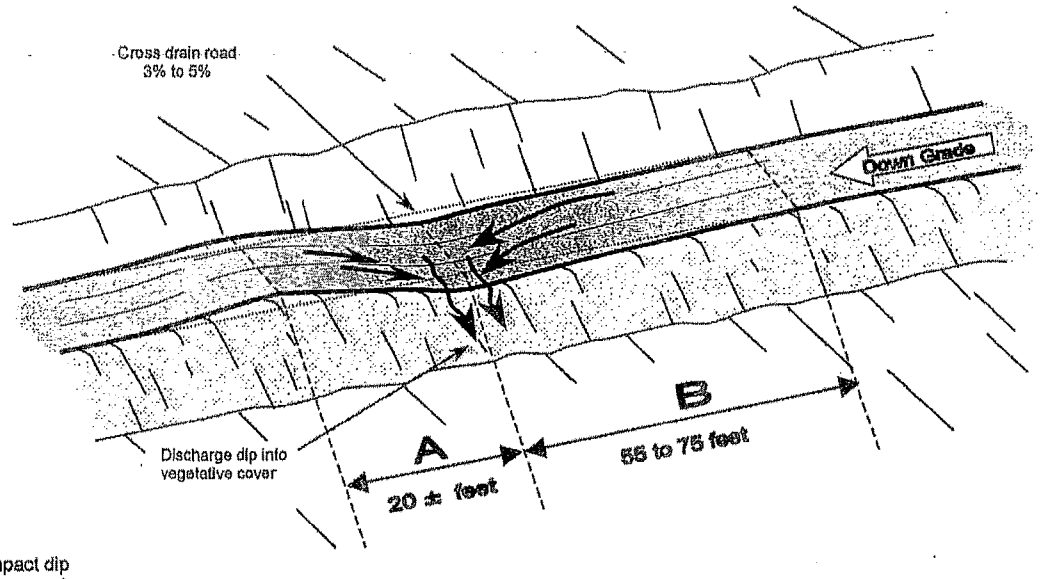
NOTES

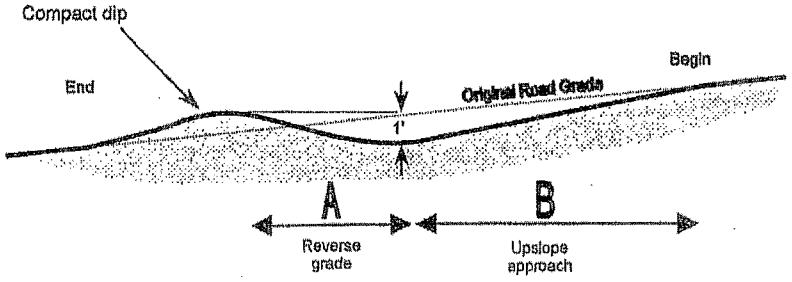
1. Identify waterbar locations that take advantage of natural drainage features and minimize the amount of disturbance required for waterbar construction
2. All waterbars shall begin at the intersection of the roadbed surface and the cut slope and run the entire width of the road surface prism.
3. Waterbar length shall not exceed 1.5 times the width of the road surface.
4. Acceptable waterbars shall be skewed 30 to 45 degrees.
5. All waterbars shall have free flowing outlets with minimum 2% grade in the bottom of the channel that discharge onto vegetative surfaces or less erodible material where possible.
6. Native materials used to construct downslope berm shall be compacted with equipment to minimize wear resulting from trespass and/or administrative use.
7. Waterbar depth measured from the bottom of the waterbar channel to the top of the compacted berm must be between 12" and 16" high.
8. Compacted waterbars must be passable in a 4WD vehicle unless otherwise specified in the contract or by a logging supervisor in writing.

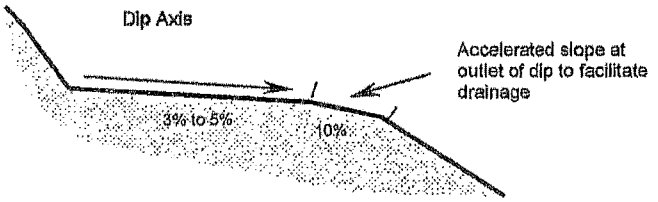
WATERBAR

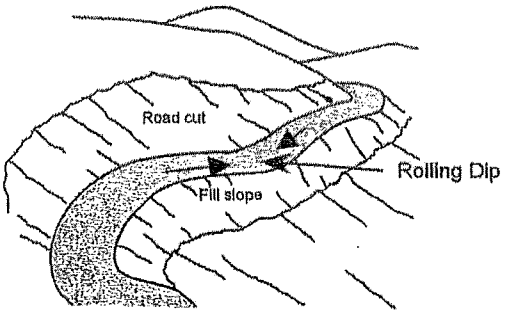
STANDARD PLAN

Standard Detail







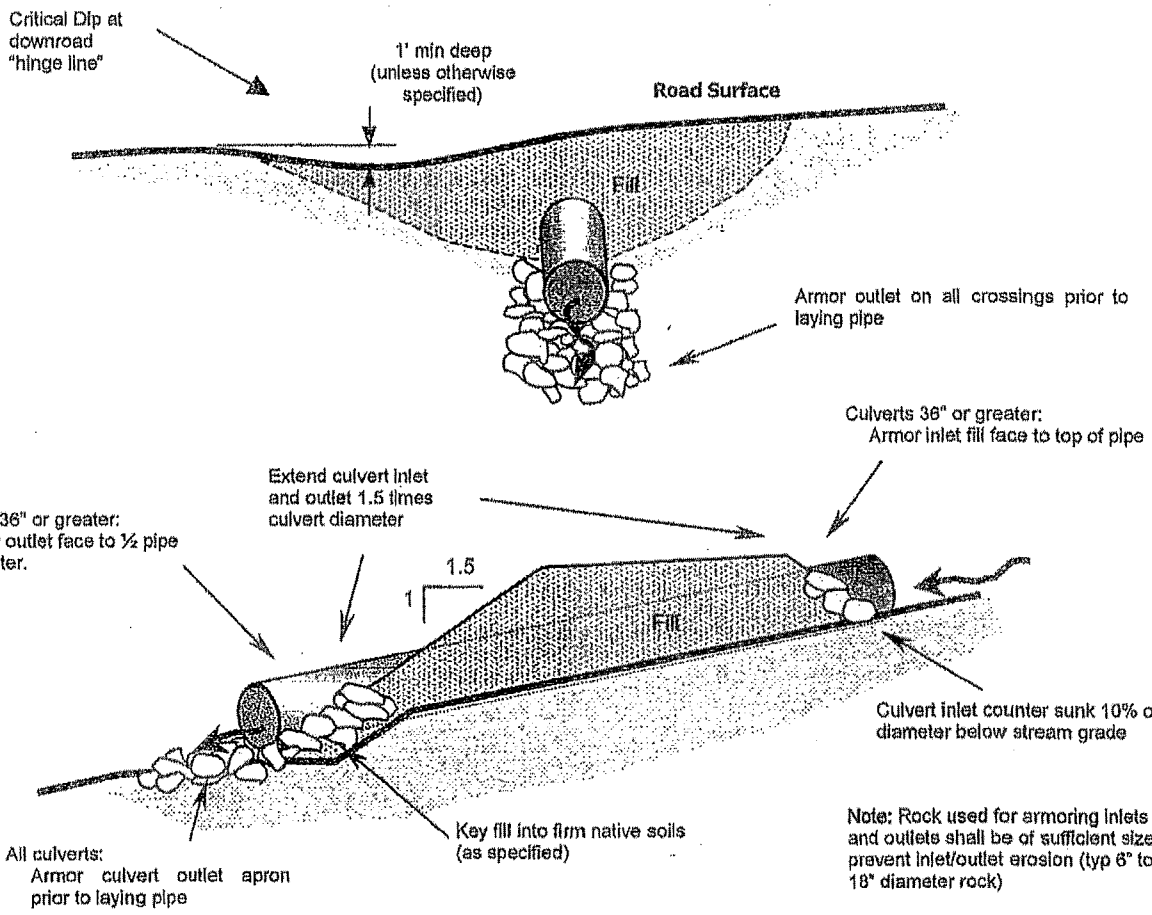


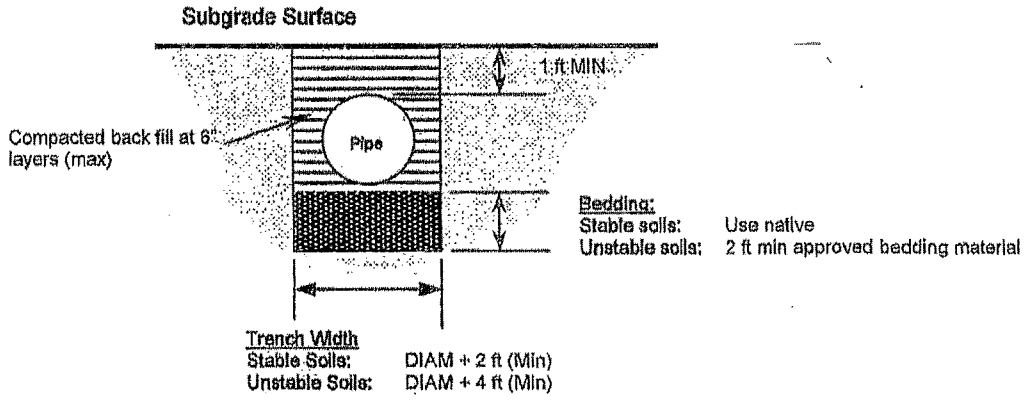
ROLLING DIP DIMENSIONS					
		MAIN LINE ROAD		SECONDARY ROAD	
Road Grade (%)	Depth of trough Depth below downslope crest (ft)	A: Reverse grade (Distance from trough to downroad crest (ft)	B: Upslope Approach Distance from up-road start of rolling dip to trough (ft)	A: Reverse grade (Distance from trough to downroad crest (ft)	B: Upslope Approach Distance from up-road start of rolling dip to trough (ft)
<6	1.0	20	65	15	55
6 - 8	1.0	20	75	15	65

NOTES:

- A rolling dip is a broad long permanent dip constructed into native soils. It is intended to drain the road while not significantly impeding traffic.
- The cross drain road (outslope) at 3% to 5%
- Dip outlets should be located to drain into areas with adequate sediment filter quality and non-erodible material such as rock, slash, brush, etc. Where specified, the bottom of the outfall of the dip will be surface rocked.
- Where natural slopes exceed 50%, fill shall not be pushed over the dip outlet. A backhoe or excavator may be required to pull back fill at outlet of existing dips.

	ROLLING DIP STANDARD PLAN	Standard Detail



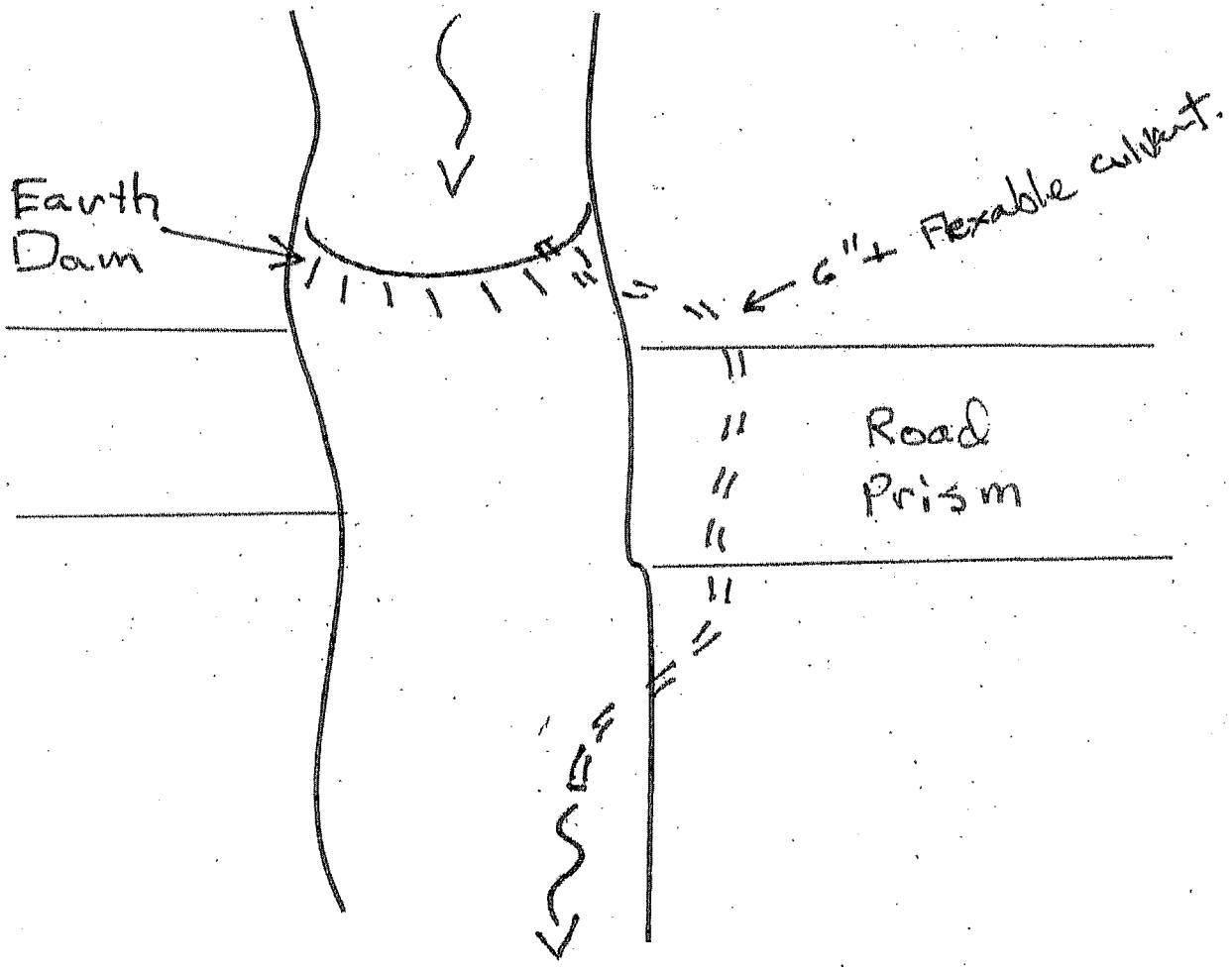


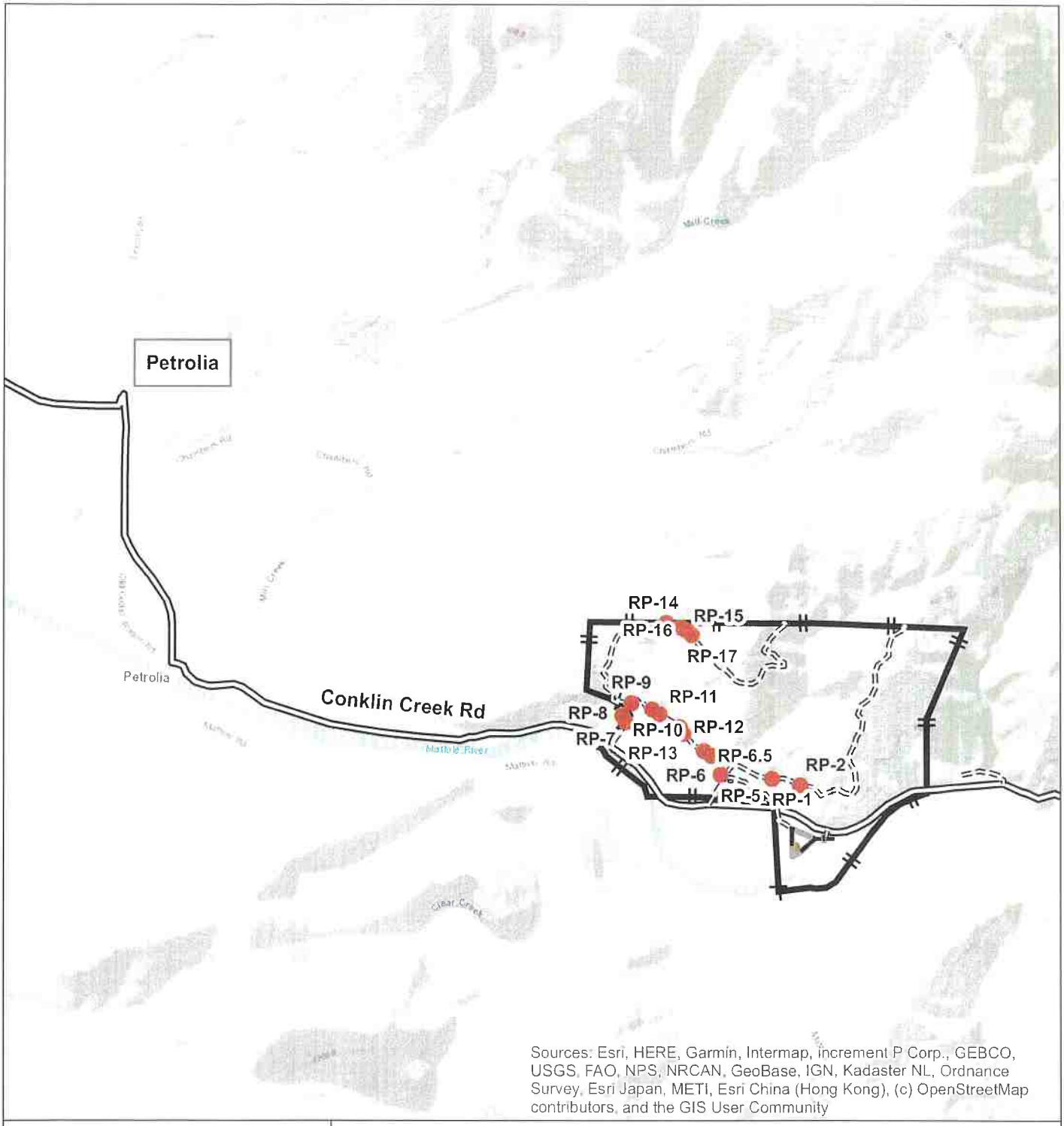
Notes:

- The culvert bed shall be clean and free of large woody debris and large rocks.
- Unsuitable foundation material (highly plastic material – "blue goo") shall be excavated below the invert elevation of the culvert to an approximate depth of 2 feet and a width of at least the culvert diameter plus 4 feet.
- Unsuitable material shall be replaced with selected granular foundation material and compacted to obtain a uniform foundation.
- Select mineral soil shall be used for culvert backfill. The back fill shall be free of lumps, chunks, highly plastic material, and organic material
- No rocks greater than 3" in any dimension placed closer than 1 foot to the culvert.
- Back fill shall be compacted to a degree greater than the surrounding soils. Soil moisture shall be adequate to achieve suitable compaction
- See Text for more detail.

FG2023 10(D) **Water Diversion Plan**

If water is present and diversion of flow around the work site is necessary, then an impoundment will be constructed and gravity flow or pumping flow through a pipe around the work site will be utilized.





Ben Brown LSAA
General Location Map
APN 105-111-007

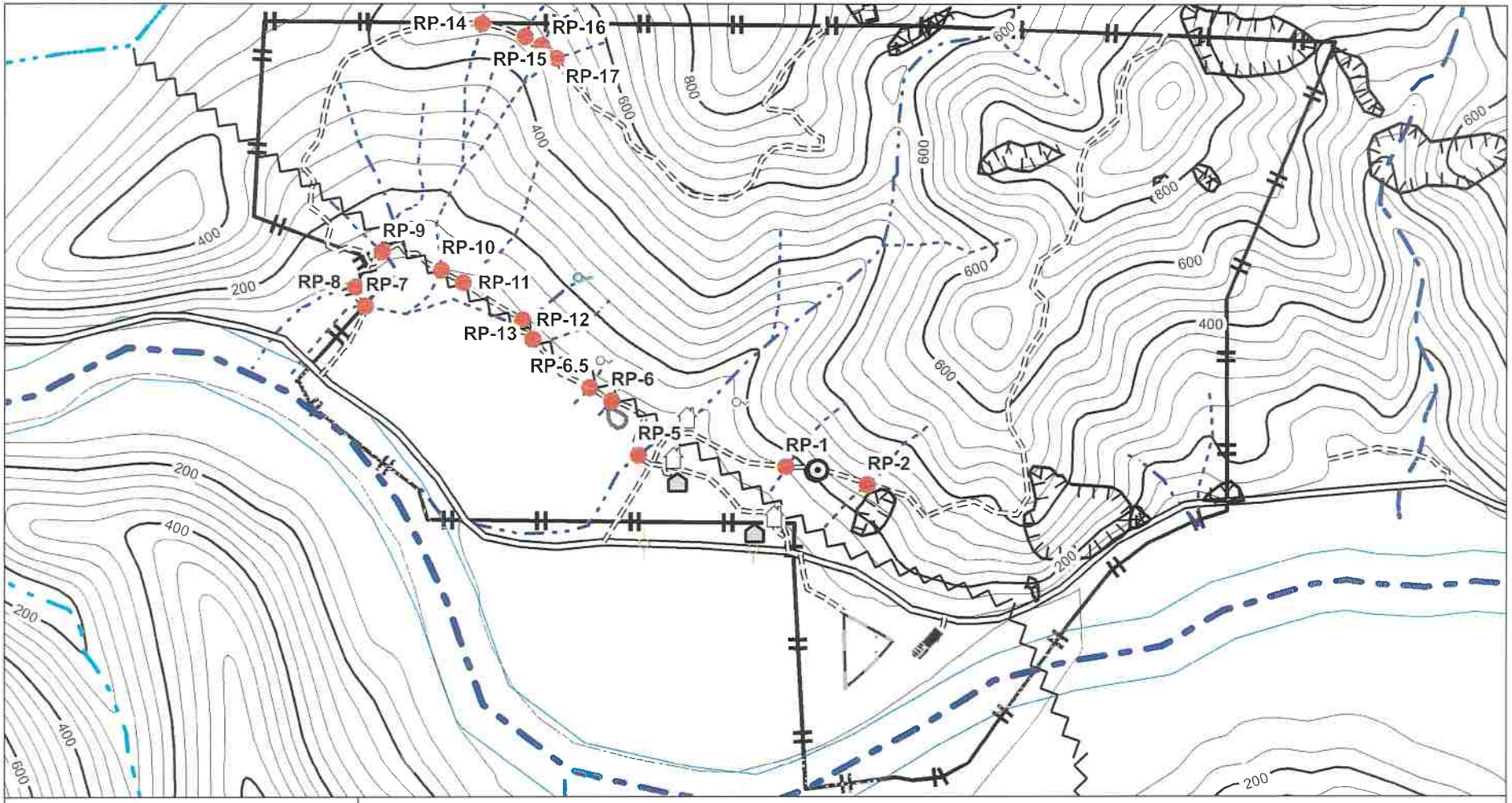
Sec. 11 & 12; T2S; R2W; HB&M;
Humboldt County
Located on the Buckeye Mtn. &
Petrolia 7.5' USGS Quadrangles

Roadpoints
Proposed Barn (5000 sq. ft.)
Proposed Outdoor Cultivation Area
County Roads
Private Roads
Parcel Boundary

N

0 900 1,800 3,600
Feet 1 inch = 2,000 feet

Date: 8/19/2020



Ben Brown LSAA
Detail Map 1

APN 105-111-007

Sec. 11 & 12; T2S; R2W; HB&M;
Humboldt County
Located on the Buckeye Mtn. &
Petrolia 7.5' USGS Quadrangles

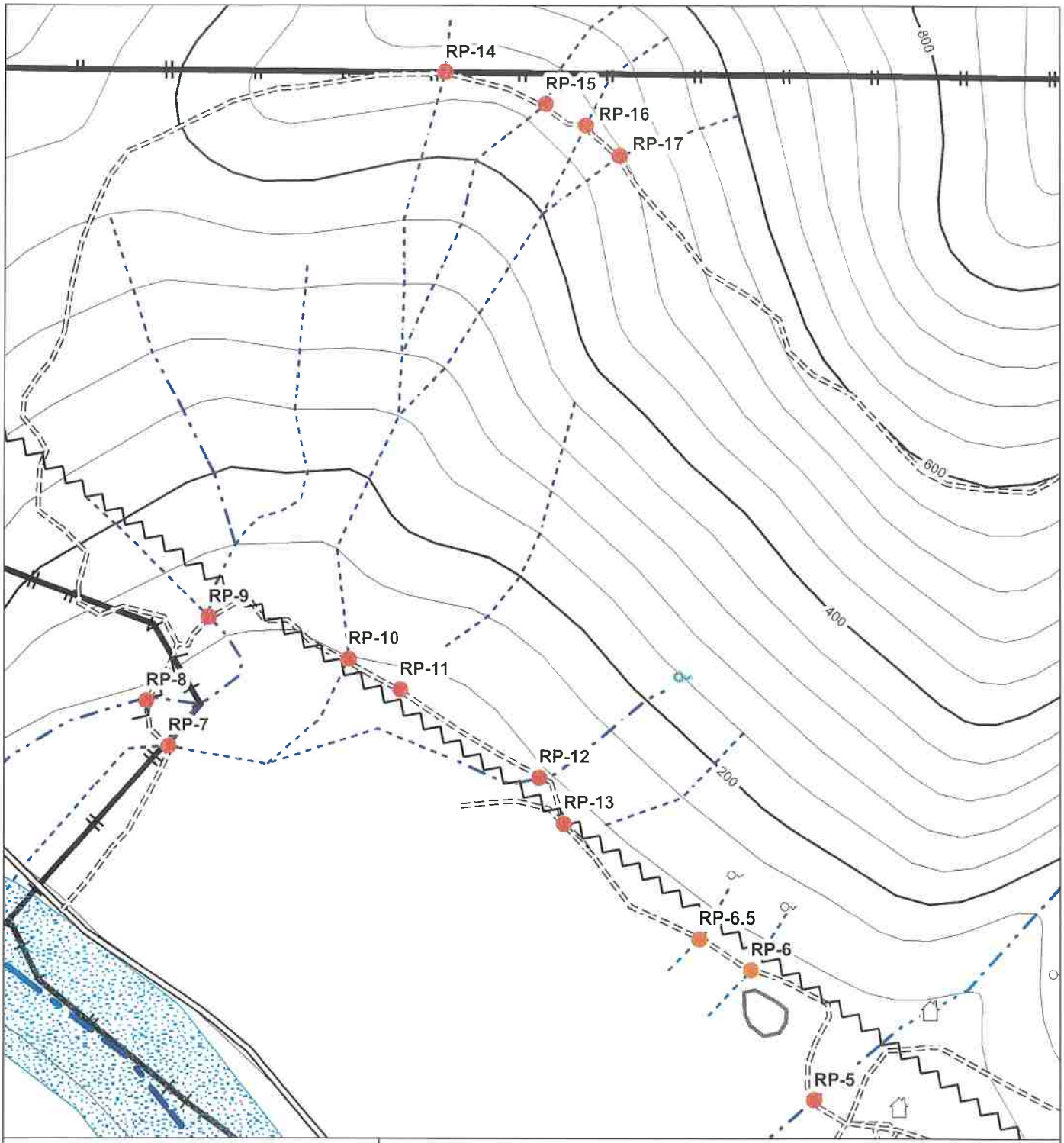
- House
- Shed
- Underground Cables
- Roadpoints
- Spring
- Spring (Dry pond)
- Water Tank
- PG&E powerlines
- Unstable Area
- Proposed Greenhouses (3200 sq. ft.)
- Proposed Barn (5000 sq. ft.)
- Proposed Outdoor Cultivation Area (1 acre)
- Class IV Pond
- County Roads
- Private Roads
- Class I - Mattole River
- Class I Stream
- Class II Stream
- Class III Stream
- Unclassified Class I or II
- Unclassified Class II or III
- Parcel Boundary*

*Note: In 1992, the landowner notified Humboldt County Planning Dept. of a lot line adjustment for APNs 105-111-007 & 105-121-003, parcel boundary mapped above reflects the lot line adjustment. Please see attached.

N

0 345 690 1,380
Feet 1 inch = 750 feet

Date: 8/20/2020



Ben Brown LSAA
Detail Map 2

APN 105-111-007

Sec. 11 & 12; T2S; R2W; HB&M;
Humboldt County
Located on the Buckeye Mountain &
Petrolia 7.5' USGS Quadrangles

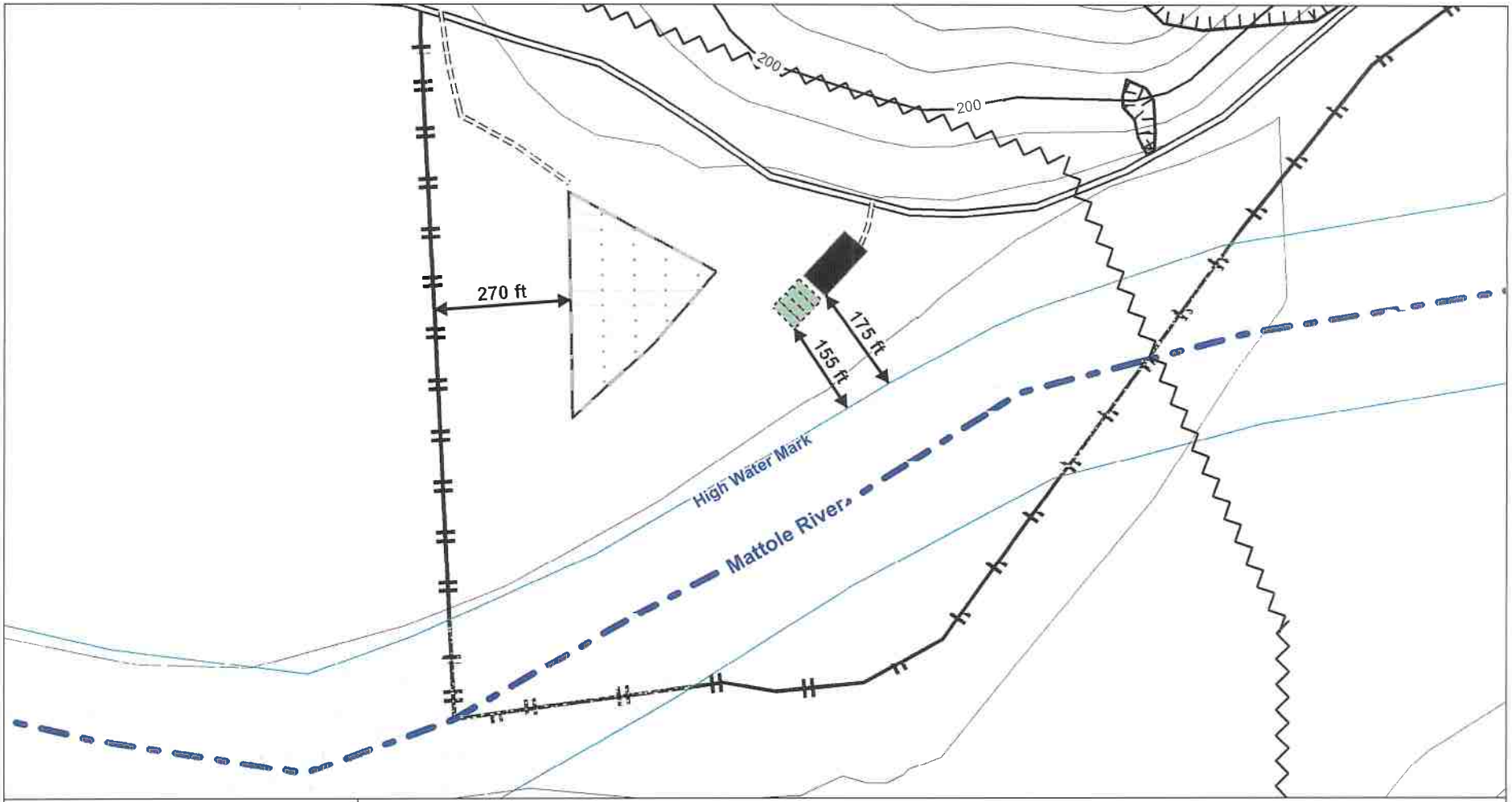
- Roadpoints
- House
- Spring (Dry pond)
- Spring
- PG&E powerlines
- Class IV Pond
- County Roads
- Private Roads
- Class I - Mattole River
- Class II Stream
- Class III Stream
- Parcel Boundary*

*Note: In 1992, the landowner notified Humboldt County Planning Dept. of a lot line adjustment for APNs 105-111-007 & 105-121-003, parcel boundary mapped above reflects the lot line adjustment. Please see attached.

N

0 137.5 275 550
Feet 1 inch = 300 feet

Date: 8/20/2020



Ben Brown LSAA
Detail Map 3

APN 105-111-007

Sec. 11 & 12; T2S; R2W; HB&M;
Humboldt County
Located on the Buckeye Mtn. &
Petrolia 7.5' USGS Quadrangles

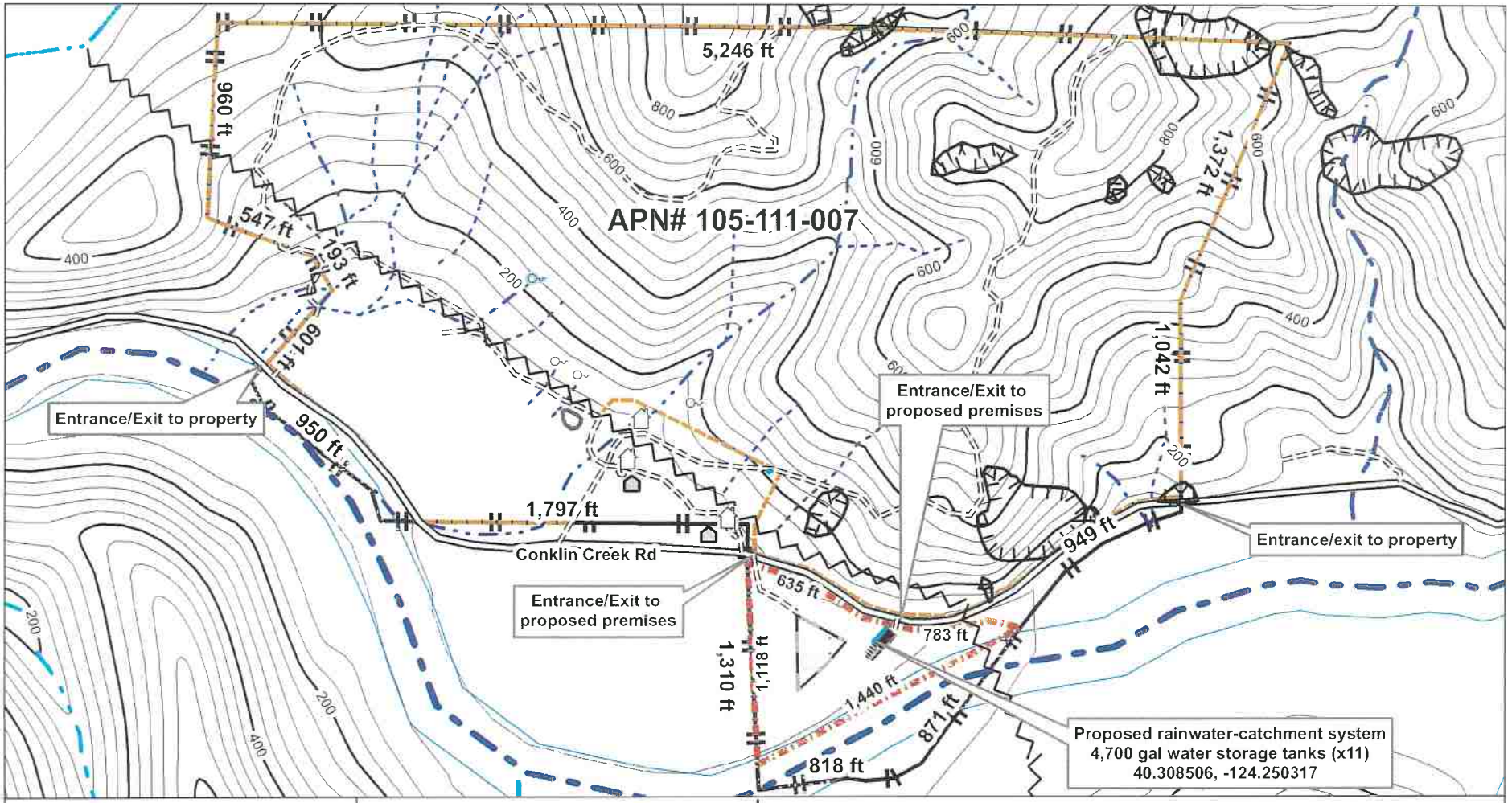
- Underground Cables
- PG&E powerlines
- Unstable Area
- Proposed Greenhouses (3200 sq. ft.)
- Proposed Barn (5000 sq. ft.)
- Proposed Outdoor Cultivation Area (1 acre)
- County Roads
- Private Roads
- Class I - Mattole River
- Parcel Boundary*

*Note: In 1992, the landowner notified Humboldt County Planning Dept. of a lot line adjustment for APNs 105-111-007 & 105-121-003, parcel boundary mapped above reflects the lot line adjustment. Please see attached.

N

0 115 230 460
Feet 1 inch = 250 feet

Date: 8/20/2020



Property Diagram

APN 105-111-007

Sec. 11 & 12; T2S; R2W; HB&M;
Humboldt County
Located on the Buckeye Mtn. &
Petrolia 7.5' USGS Quadrangles

- Proposed rainwater catchment tanks
- House
- Shed
- Spring
- Spring (Dry pond)
- PG&E powerlines
- Unstable Area
- Proposed Greenhouses (3200 sq. ft.)
- Proposed Barn (5000 sq. ft.)
- Proposed Cultivation Area (1 acre)
- Class IV Pond
- County Roads
- Private Roads
- Class I - Mattole River
- Class I Stream
- Class II Stream
- Class III Stream
- Unclassified Class I or II
- Unclassified Class II or III
- Cattle Grazing
- Proposed Premises Boundary
- Property Boundary*

*Note: In 1992, the landowner notified Humboldt County Planning Dept. of a lot line adjustment for APNs 105-111-007 & 105-121-003, the parcel boundary mapped above reflects the lot line adjustment. Please see attached.

N

0 345 690 1,380 Feet 1 inch = 750 feet

Hohman and Associates Forestry Consultants
Date: 8/24/2020

Ben Brown Road Point Locations

Point	Latitude	Longitude
RP-1:	40.310722	-124.252872
RP-2:	40.310439	-124.251518
RP-5:	40.310916	-124.255575
RP-6:	40.311508	-124.256008
RP-6.5:	40.311701	-124.256365
RP-7:	40.312693	-124.260382
RP-8:	40.312946	-124.260557
RP-9:	40.313430	-124.260111
RP-10:	40.313212	-124.259060
RP-11:	40.313047	-124.258672
RP-12:	40.312592	-124.257497
RP-13:	40.312311	-124.257427
RP-14:	40.316550	-124.258461
RP-15:	40.316386	-124.257703
RP-16:	40.316272	-124.257398
RP-17:	40.316106	-124.257140

PLN-2020-16633

WETLAND DETERMINATION REPORT

Assessor Parcel Number (APN):
105 – 121 – 003

Prepared For:

Avicenna Holdings, LLC
Conklin Creek Road
Petroila, CA 95558

Prepared By:

Naiad
Biological
Consulting
www.naiadbiological.com
PO Box 121
Samoa, CA 95564
naiadbiological@gmail.com

Date Prepared:

March 11th, 2021

Certification: I hereby certify that the statements furnished in this report present the data and information required for this wetland determination, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X _____.

Greg Davis
Contracted Wetland Scientist for Naiad Biological Consulting

Table of Contents

SECTION 1 SUMMARY OF FINDINGS AND CONCLUSIONS 1

SECTION 2 INTRODUCTION, BACKGROUND, AND PROJECT UNDERSTANDING 2

2.1 PURPOSE AND NEED 2
2.2 BIOLOGIST'S QUALIFICATIONS 2
2.3 STUDY AREA DESCRIPTION AND GEOGRAPHIC SETTING 2

SECTION 3 METHODS 3

3.1 PRE-SITE VISIT DATA COMPILATION AND PREPARATION 3
3.2 VEGETATION 3
3.3 SOILS 5
3.4 HYDROLOGY 6

SECTION 4 RESULTS AND DISCUSSION 8

4.1 EXISTING SITE CONDITIONS 8
4.1.1 TP-1 ..... *8*
4.1.2 TP-2 ..... *8*
4.1.3 TP-3 ..... *8*
4.1.4 TP-4 ..... *8*
4.1.5 TP-5 ..... *9*
4.1.6 TP-6 ..... *9*
4.1.7 TP-7 ..... *9*

SECTION 5 CONCLUSION 10

5.1 POTENTIAL IMPACTS AND RECOMMENDED MITIGATION 10
5.1.1 Potential Direct Impacts *10*
5.1.2 Potential Indirect Impacts *10*
5.1.3 Recommendations *10*
5.2 STATEMENT OF LIMITATION 10

SECTION 6 REFERENCES 12

LIST OF TABLES:

Table 1. Wetland Indicator Status Ratings 4
Table 2. NRCS Web Soil Survey Results for APN 105-121-003 6
Table 3. WETS Rainfall Data 7

LIST OF APPENDICES:

Appendix A – Maps
Appendix B – Wetland Determination Data Forms
Appendix C – Plant Species List
Appendix D – NRCS Web Soil Survey Map Unit Descriptions
Appendix E – Photo Documentation

Section 1 Summary of Findings and Conclusions

A wetland determination was completed for Avicenna Holdings, LLC to determine the presence or absence of wetlands within the established Survey Area.

The Study Area is located approximately 2.4 air miles southeast of Petrolia, CA off Conklin Creek Road and is bordered by the Mattole River. Only riverine wetlands associated with the Mattole River are identified within the focused Survey Area by the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), but additional NWI wetlands are mapped within the greater Study Area.

No wetlands were identified within the focused Survey Area. The only aquatic resource identified during this assessment was the Mattole River and its associated riparian dripline.

The potential development located in the pasture of the Survey Area should be sited to avoid impacts to aquatic resources. Due to the presence of summer-run steelhead habitat at this site, a buffer of 200-ft was applied to the Mattole River. Since most of the riparian dripline is located over 100-ft from the ordinary high-water mark of the Mattole River, the more conservative buffer of 100-ft was applied to the riparian drip line as per Humboldt County guidelines.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

This wetland determination report has been prepared at request from Avicenna Holdings, LLC to aid in the planning for potential land development. This assessment is intended to identify aquatic resources that may fall under the jurisdiction of regulatory agencies including, but not limited to, the U.S. Army Corps of Engineers (USACE), North Coast Regional Water Quality Control Board, and the California Department of Fish and Wildlife.

2.2 Biologist's Qualifications

The wetland determination for this Report was conducted by Greg Davis. Greg, a contracted wetland scientist of Naiad Biological Consulting, holds a Bachelor of Science Degree in Rangeland Resource Science with a concentration in wildland soils from Humboldt State University. He is a certified wetland delineator through Richard Chinn Environmental Training and has 6 years of professional experience conducting wetland delineations, watershed assessments, and botanical surveys in Northern California.

2.3 Study Area Description and Geographic Setting

This report considers the wetland communities that could be affected by the proposed project based on available spatial data and observations made during a site visit.

On March 3rd, 2021, a wetland determination was conducted on the subject parcel, within a focused Survey Area, to assess potential impacts associated with land development.

The parcel (APN: 105-121-003) where the proposed project site is to occur is 256 acres in size and the focused Survey Area is approximately 13 acres (Appendix A, Map 1). This parcel is located approximately 2.4 air miles southeast of Petrolia, California within the Petrolia and Buckeye Mountain 7.5-minute quadrangles. The Study Area is located within the Mattole River watershed. The elevation of the center of the proposed project site is approximately 100 feet (~30.5 meters) above sea level (Google Earth Pro, 2021).

Section 3 Methods

3.1 Pre-Site Visit Data Compilation and Preparation

An assessment was conducted on the property for jurisdictional waters and wetlands of the United States pursuant to the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (WMVC Supplement, USACE 2010). Sampling locations were chosen based on representative plant communities and topography within the project site (Maps 2 and 3). The sampling locations were evaluated for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundaries were delineated by sampling paired data points to determine wetland to upland transitional areas (Appendix B *"Wetland Determination Data Forms"*).

Federal regulations define wetlands as:

> "*Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil*" [33CFR328.3(b)].

This definition expresses that, under normal conditions, three parameters must be met to classify a site as a jurisdictional wetland, which includes hydrophytic vegetation, hydric soils, and wetland hydrology.

The USFWS National Wetlands Inventory (NWI) does not have wetlands documented within the subject parcel. Due to the lack of field data, this general categorization by NWI is not intended for planning purposes as noted in the "Data Limitations, Exclusions, and Precaution" disclaimer:

> *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)

3.2 Vegetation

The presence of hydrophytic vegetation for each site was determined by applying the wetland indicator status (see Table 1, below) of each plant species present in multiple strata using the *WMVC 2018 Wetland Plant List* (USACE, 2018). A plant species list of the collective sampling points is provided in Appendix C of this report.

Table 1. Wetland Indicator Status Ratings

Indicator Status	Indicator Code	Description	% Occurrence in Wetlands
Obligate	OBL	Occur almost always under natural conditions in wetlands.	99%
Facultative Wetland	FACW	Usually occur in wetlands but occasionally found in non-wetlands.	67-99%
Facultative	FAC	Equally likely to occur in wetlands and non-wetlands.	33-67%
Facultative Upland	FACU	Usually occur in non-wetlands but occasionally found in wetlands.	1-33%
Upland	UPL	Occur in wetlands in another region but occur almost always under natural conditions in non-wetlands in the region specified.	1%

The methodology used for determining the presence of hydrophytic vegetation is dependent on the dominant plant species observed at a sampling location using the 50/20 rule. The WMVC Regional Supplement (USACE, 2008) describes the 50/20 rule as:

> "*...a repeatable and objective procedure for selecting dominant plant species and is recommended when data are available for all species in the community.*
>
> *Dominant species are chosen independently from each stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.*"

Hydrophytic vegetation was determined at the sampled locations by using the Dominance Test, which is met when more than 50 percent of the dominant plant species across all strata are rated OBL, FACW, or FAC. If the Dominance Test for hydrophytic vegetation was not met, then the Prevalence Index was applied.

The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot or other sampling unit, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighting is by abundance (absolute percent cover). It is a more comprehensive analysis of the hydrophytic status of the community than one based on just a few dominant species. It is particularly useful (1) in communities with only one or two dominants, (2) in highly diverse communities where many species may be present at roughly equal coverage, and (3) when strata differ greatly in total plant cover (e.g., total herb cover is 80 percent, but sapling/shrub cover is only 10 percent). The prevalence index is used in this supplement (WMVC) to determine whether hydrophytic vegetation is present on sites where indicators of hydric soil and wetland hydrology are present, but the vegetation initially fails the dominance test.

The following procedure is used to calculate a plot-based prevalence index. The method was described by Wentworth et al. (1988) and modified by Wakeley and Lichvar (1997). It uses the same field data (i.e., percent cover estimates for each plant species) that were used to select dominant species by the 50/20 rule, with the added constraint that at least 80 percent of the total vegetation cover on the plot must be of species that have been correctly identified and have an assigned indicator status (including UPL). For any species that occurs in more than one stratum, cover estimates are summed across strata. Steps for determining the prevalence index are as follows:

1. Identify and estimate the absolute percent cover of each species in each stratum of the community. Sum the cover estimates for any species that is present in more than one stratum.
2. Organize all species (across all strata) into groups according to their wetland indicator status (i.e., OBL, FACW, FAC, FACU, or UPL) and sum their cover values within groups. Do not include species that were not identified.
3. Calculate the prevalence index using the following formula:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

where:

PI = Prevalence index
A_{OBL} = Summed percent cover values of obligate (OBL) plant species;
A_{FACW} = Summed percent cover values of facultative wetland (FACW) plant species;
A_{FAC} = Summed percent cover values of facultative (FAC) plant species;
A_{FACU} = Summed percent cover values of facultative upland (FACU) plant species;
A_{UPL} = Summed percent cover values of upland (UPL) plant species.

For the prevalence index to be met, the value calculated based on the existing cover of plant species must be 3.0 or less.

3.3 Soils

Prior to the site inspection, existing soil data was accessed from the USDA Web Soil Survey to identify potential hydric soils located within the project site (See Map 4 and Appendix D). Refer to Table 2 below for a description of the soil map units on the subject parcel.

Table 2. NRCS Web Soil Survey Results for APN 105-121-003

Map Unit Symbol	Soil Map Unit Name	Hydric Soil Rating	
		Major Components	Minor Components
100	Water and Fluvents, 0-2% slopes	Hydric	Hydric
187	Pepperwood-Shivelyflat complex, 0-2% slopes	Not Hydric	Hydric (Weott – 2%)
569	Crazycoyote-Windynip-Caperidge complex, 15-30% slopes	Not Hydric	Not Hydric

Soil profiles were examined for hydric soil indicators listed in the WMVC Regional Supplement. The soil profiles for each test pit (TP) within the project site was documented on the associated wetland determination data forms (Appendix B). The Munsell color chart (Gretag/Macbeth, 2000) was used to determine the hue, value, and chroma of soil matrices and redoximorphic features. Soil textures were determined using the texture by feel technique. When characterizing soil profiles, each sampling location was also inspected for wetland hydrology indicators.

3.4 Hydrology

At each test pit, primary and secondary wetland hydrology indicators were documented on the associated wetland determination data forms, if present (Appendix B). Indicators for wetland hydrology are derived from four groups, (A) observation of surface water or saturated soils; (B) evidence of recent inundation; (C) evidence of current or recent soil saturation; and (D) evidence from other site conditions or data. Additional remarks regarding hydrology are included in the field data forms.

Site hydrology was evaluated prior to conducting the assessment of the Project Site by utilizing the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Climate Analysis for Wetlands Tables (WETS). Precipitation data from the WETS tables was interpreted by using the Direct Antecedent Rainfall Evaluation Method or DAREM (Sprecher and Warne, 2000). The DAREM method utilizes data from the three months prior to inspection to determine whether precipitation, and inherently site hydrology, is "normal", "drier than normal", or "wetter than normal" (Sumner et al. 2009). Prior to the March 3rd, 2021 inspection, rainfall data for December, January, and February was compared to the 30-year rainfall average sourced from the nearest WETS station in Scotia, CA (1990-2020). Normal precipitation for a given month is defined by falling within the 30th and 70th percentile of the 30-year average rainfall for a given area. Based on the assessment of the WETS table, precipitation was "normal" at the time inspection (Table 3).

Table 3. WETS Rainfall Data

Site Hydrology for March 3, 2021								
Prior Month		WETS Rainfall Percentile[1] (inches)		Measured Rainfall (inches)	Condition: Dry, Wet, Normal	Condition Value (1=dry, 2=normal, or 3=wet)	Month Weight	Multiply Previous two columns
	Name	30th	70th					
1st (most recent)	February	4.36	9.20	5.08	Normal	2	3	6
2nd	January	4.53	10.48	9.50	Normal	2	2	4
3rd	December	5.00	11.43	3.95	Dry	1	1	1
Sum								**11**
Rainfall of prior period was								**Normal[2]**

[1]Rainfall Data is sourced from the Scotia, CA WETS Station

[2]**Drier than normal** (sum is 6-9), **normal** (sum is 10-14), **wetter than normal** (sum is 15-18)

Section 4 Results and Discussion

4.1 Existing Site Conditions

On March 3rd of 2021, Greg Davis conducted a site inspection to determine the presence of wetlands within a focused, 13-acre Survey Area. Sampling locations within the survey area are shown in Map 2 and photo documentation is included in Appendix E of this document.

4.1.1 TP-1

Test Pit (TP)-1 is located at the eastern edge of the Survey Area adjacent to a linear berm that parallels the main pasture (Photos 1-2). The surrounding area has a shrub stratum dominated by *Baccharis pilularis* (coyote brush) and an herb stratum dominated by *Agrostis stolonifera* (creeping bentgrass). This sampling location did not pass the dominance test for hydrophytic vegetation and it did not meet the prevalence index by having a value of 3.36. No hydric soil or wetland hydrology indicators were present at this sampling location.

4.1.2 TP-2

TP-2 is located on an alluvial terrace of the Mattole River and is identified as an upper perennial, temporarily flooded, unconsolidated shore (R3USA) according the USFWS National Wetland Inventory but was determined to not be located within a wetland (Photos 3-4). This site is slightly upslope of the ordinary high-water mark of the Mattole River. The surrounding area has an *Alnus rubra* (red alder) tree stratum, a *Cytisus scoparius* (scotch broom) - coyote brush shrub stratum, and a *Festuca arundinacea* (reed fescue) - creeping bentgrass herb stratum. This sampling location passed the dominance test for hydrophytic vegetation, but no hydric soil indicators were present. The primary wetland hydrology indicator Drift Deposits (B2) was identified at this site, but it does not appear that there is a high frequency of inundation.

4.1.3 TP-3

TP-3 is located within the riparian dripline of the Mattole River and is identified as an upper perennial, temporarily flooded, unconsolidated shore (R3USA) according the USFWS National Wetland Inventory but was determined to not be located within a wetland (Photos 5-6). The surrounding area has an *Pseudotsuga menziesii* (Douglas fir) - red alder tree stratum, a coyote brush shrub stratum, and a *Pteridium aquilinum* (bracken fern) - *Cynosurus echinatus* (bristly dogstail grass) - *Cirsium vulgare* (bullthistle) herb stratum. This sampling location did not pass the dominance test for hydrophytic vegetation and it did not meet the prevalence index by having a value of 4.19. No hydric soil or wetland hydrology indicators were present at this sampling location.

4.1.4 TP-4

TP-4 is located in a small depressional feature at the southern edge of the pasture (Photos 7-8). The surrounding area has a *Salix lasiandra* (pacific willow) – Douglas fir tree stratum, a coyote brush -

Toxicodendron diversilobum (poison oak) shrub stratum, an unknown facultative grass – *Mentha pulgium* (pennyroyal) herb stratum, and a *Rubus ursinus* (California blackberry) vine stratum. This sampling location passed the dominance test for hydrophytic vegetation, but no hydric soil indicators were present. Only one secondary wetland hydrology indicator, Geomorphic Position (D2), was identified at this site.

4.1.5 TP-5

TP-5 is located in the center of the pasture, which appeared lush green on aerial imagery compared to surrounding vegetation (Photos 9-10). The surrounding area composed of a grazed setting dominated by unknown facultative grasses. This sampling location passed the dominance test for hydrophytic vegetation based on the conservative assumption that the unknown grasses were facultative. No hydric soil or wetland hydrology indicators were present at this sampling location.

4.1.6 TP-6

TP-6 is located between Conklin Creek Road and the northern edge of the pasture (Photos 11-12). The surrounding area has a pacific willow – *Umbellularia californica* (bay laurel) tree stratum, a poison oak shrub stratum, an unknown facultative grass herb stratum, and a California blackberry vine stratum. This sampling location passed the dominance test for hydrophytic vegetation, but no hydric soil indicators were present. Only one secondary wetland hydrology indicator, Geomorphic Position (D2), was identified at this site.

4.1.7 TP-7

TP-7 is located between Conklin Creek Road and the northern edge of the pasture (Photos 13-14). The surrounding area has a pacific willow tree stratum, a poison oak – coyote brush shrub stratum, a *Urtica dioica* (stinging nettle) herb stratum, and a California blackberry vine stratum. This sampling location passed the dominance test for hydrophytic vegetation, but no hydric soil indicators were present. Only one secondary wetland hydrology indicator, Geomorphic Position (D2), was identified at this site.

Section 5 Conclusion

5.1 Potential Impacts and Recommended Mitigation

5.1.1 Potential Direct Impacts

Direct impacts are considered to be effects that may occur to the environment from direct interface associated with the proposed action. As it pertains to aquatic resources, direct impacts can be avoided by limiting potential development to areas outside of the aquatic resource buffers indicated on Map 2.

5.1.2 Potential Indirect Impacts

If best management practices are followed, there are no foreseeable indirect impacts associated with this project to the environment, surrounding habitat, or wildlife.

5.1.3 Recommendations

The following recommendations should be followed and/or taken into consideration through the development of the proposed project and operations:

- Aquatic resource buffers and setbacks should be observed for the identified aquatic resources on the property. The most conservative buffer should be observed.
    - A 200-ft buffer shall be observed for the Mattole River due to the presence of summer-run steelhead habitat; and
    - A 100-ft buffer shall be observed for the identified riparian dripline.
- During the development of this project, best management practices (BMPs) should be used to prevent sediment, fuels, or contaminants from entering the surrounding terrestrial and aquatic environment.
- If any activities are proposed to take place within jurisdictional features, such as surface waters and/or wetlands, the landowner should obtain permission to conduct the construction work from, but not limited to, the following agencies:
    - California Department of Fish and Wildlife, Lake or Streambed Alteration Agreement (LSAA/1600)
    - North Coast Regional Water Quality Control Board, Section 401 Water Quality Certification
    - United States Army Corps of Engineers, Nationwide Permit (NWP) or Section 404 individual permit

5.2 Statement of Limitation

The data and findings presented in this Report are valid to the extent that they represent a wetland determination within the defined Survey Area as of March 3rd, 2021. These findings outlined in this

Report are based on one (1) site visit and do not provide conclusive results for any potential features outside of the Survey Area.

Deficiencies in these findings may result from the following:

- The parcel boundaries displayed in the maps created for this Report do not represent a boundary survey. Parcel and property lines shown within these maps are approximated and were acquired from Humboldt County Web GIS, and any errors within these boundaries are a result of errors in Humboldt County's GIS database.
- The aquatic resource buffers and setbacks defined in this Report, and presented in Map 2, only represent buffers to aquatic resources and do not include considerations to other biological resources, cultural resources, environmental hazards, or easements (i.e., plants, wildlife, historical landmarks, slope instability, utilities, etc.). Additional buffers and setbacks may be required for the previously mentioned resources which may alter the size of the potential development defined in this Report. Buffer sizes may vary dependent on desired land use.

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Appendix A

Maps

Avicenna Holdings, LLC Wetland Determination Report

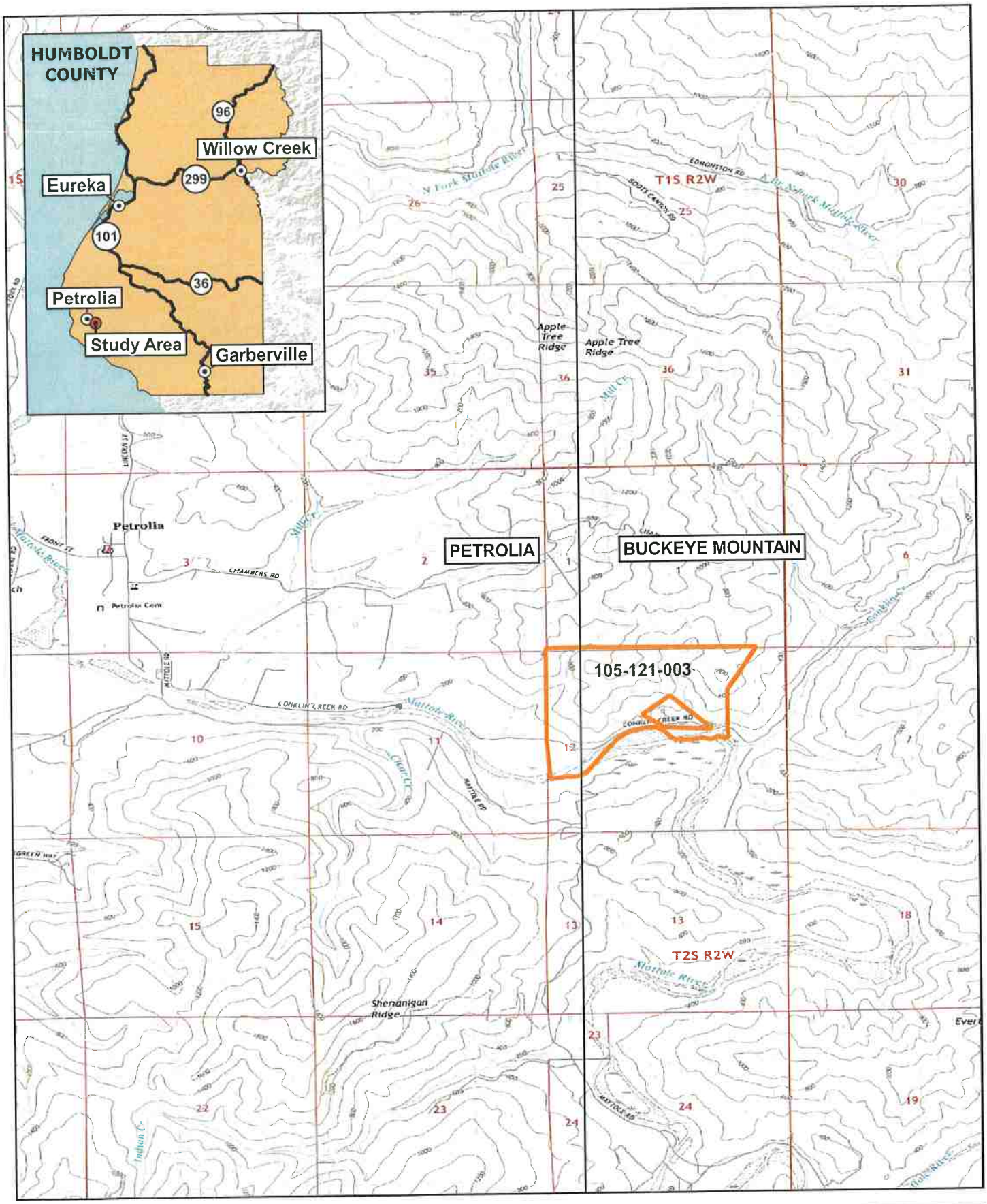
March 2021

Map 1. Site Location Map

Map 2. Wetland Delineation Site Map

Map 3. Wetland Delineation Survey Path Map

Map 4. NRCS Web Soil Survey Map



Conklin Creek Road
Petroilia, CA 95558
APN: 105-121-003

N

MAP 1. SITE LOCATION MAP

SCALE: 1 : 24,000 - STUDY AREA

Source: Petrolia / Buckeye Mountain 7.5-Minute USGS Quadrangles

Naiad Biological Consulting

Naiad Biological Consulting

MAP 2. AVICENNA HOLDINGS WETLAND DETERMINATION SITE MAP

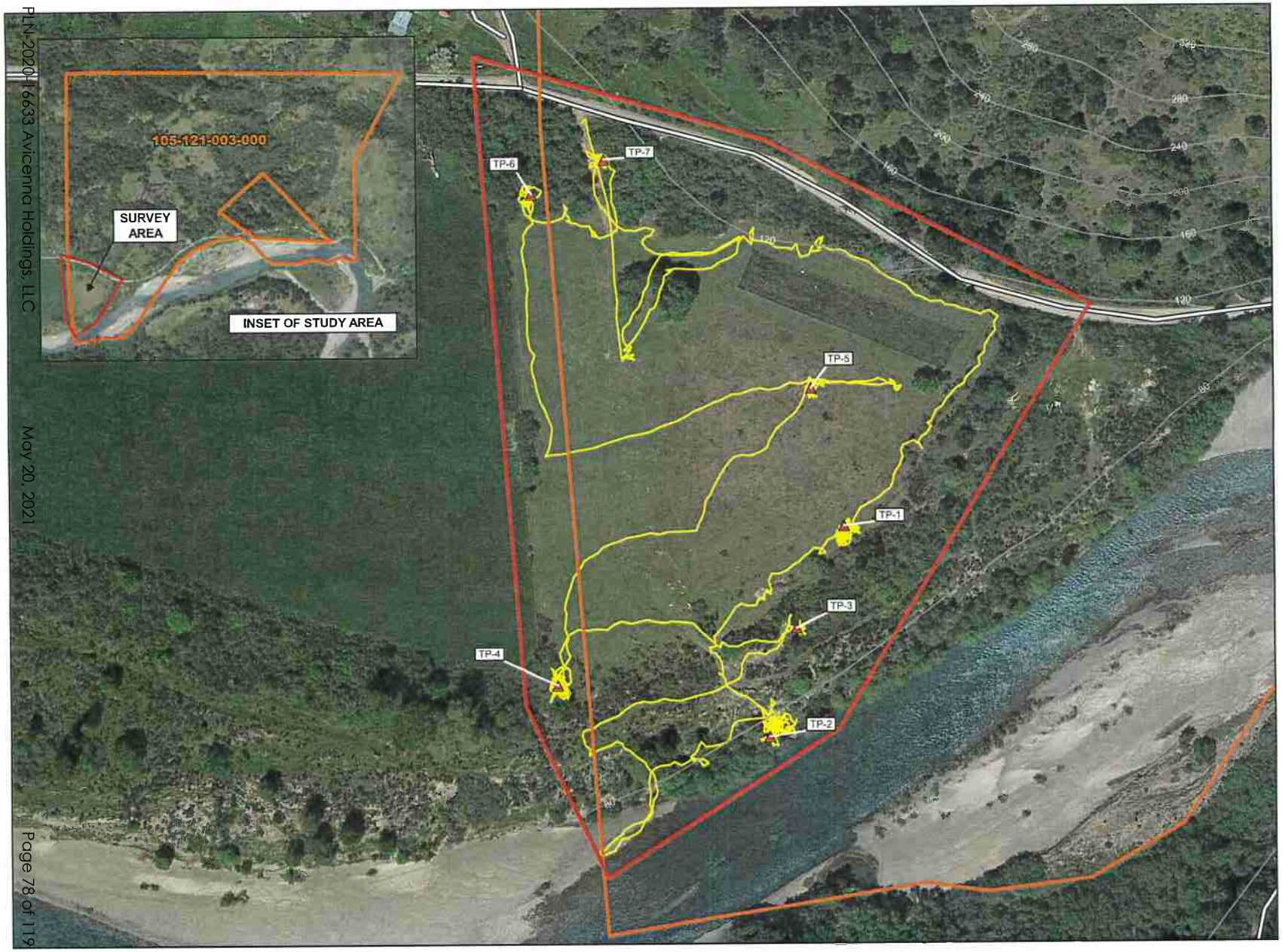
N

MAP SCALE

0 75 150 ft

LEGEND

- Humboldt County APN
- Survey Area
- 40-ft USGS Contours
- Access Roads
- Test Pit (Upland)
- Riparian Dripline
- Mattole River
- FEMA 100-yr Flood Zone
- Aquatic Resource Buffer



Naiad Biological Consulting

MAP 3. AVICENNA HOLDINGS WETLAND DETERMINATION SURVEY PATH

N

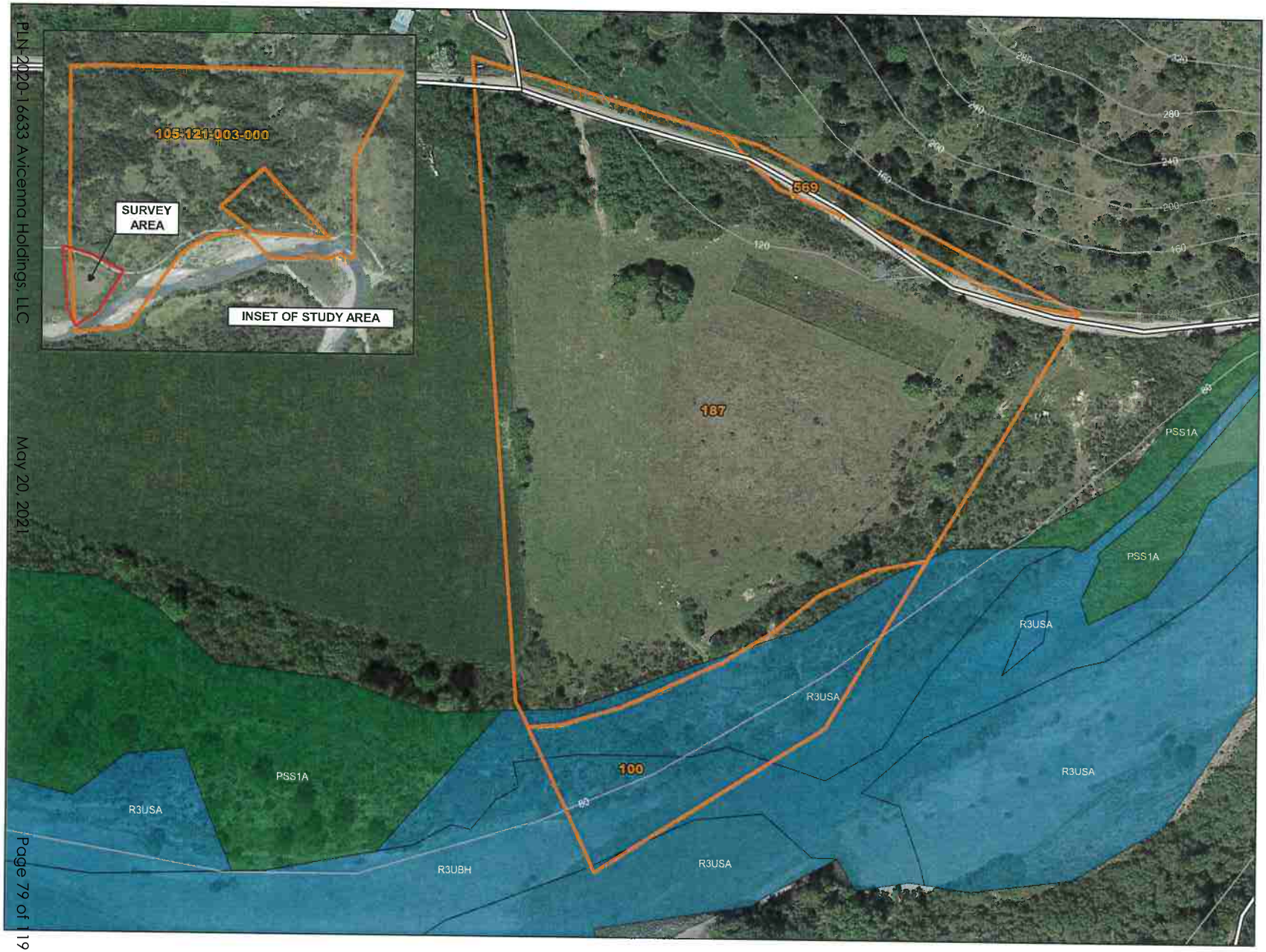
MAP SCALE

0 75 150 ft

LEGEND

- Humboldt County APN
- Survey Area
- 40-ft USGS Contours
- Access Roads
- Test Pit (Upland)
- Survey Path (3/3/2021)

PLN-2020-16633 Avicenna Holdings, LLC May 20, 2021



Naiad Biological Consulting

MAP 4. NRCS WEB SOIL SURVEY AND NATIONAL WETALNDS INVENTORY MAP

N

MAP SCALE
0 75 150 ft

LEGEND

- 40-ft USGS *Contours*
- Access Roads
- NRCS Web Soil Survey Map Unit
- NWI Scrub-Shrub Wetlands
- NWI Riverine Wetlands

NRCS Soil Map Unit Key

100 - Water and Fluvents, 0-2% slopes

187 - Pepperwood-Shivelyflat Complex, 0-2% slopes

569 - Crazycoyote-Windy-Caperidge Complex, 15-30% slopes

Appendix B

Wetland Determination Data Forms

Avicenna Holdings, LLC Wetland Determination Report

March 2021

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3-3-21
Applicant/Owner: Avicenna Holdings, LLC State: CA Sampling Point: TP-1
Investigator(s): Greg Davis Section, Township, Range: 12, T25, R2W
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1
Subregion (LRR): A Lat: 40.3078 Long: -124.2512 Datum: WGS84
Soil Map Unit Name: 187 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 ____	No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: Site is in low point east of linear berm adjacent to pasture

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25x25)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis pilularis	10	✓	NI
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Agrostis stolonifera	50	✓	FACW
2. Cynosurus echinatus	15		NI
3. Bromus maximus	10		NI
4. Dactylis glomerata	10		FACU
5. Rumex acetosella	10		FACU
6. Trifolium sp.	5		FAC
7. Elymus caput-medusae	<1		NI
8. Viola sp.	<1		FAC
9.			
10.			
11.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	5	x 3 =	15
FACU species	20	x 4 =	80
UPL species	35	x 5 =	175
Column Totals:	110 (A)		370 (B)

Prevalence Index = B/A = 3.36

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 ✓ 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	Texture	Remarks
0-3	10YR 3/1	100	-	-	-	-	SL	
3-18	10YR 4/2	100	-	-	-	-	SCL	See below *

[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:

3-18 either coarse silts or fine sand in matrix, gritty, At depth ~15-18" bgs, presence of burnt O.M. and pockets of coarse sand "below ground surface"

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:

Site is set at a lower elevation than pasture, pit was dry @ 18" bgs

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3-3-2021
Applicant/Owner: Avicenna Holdings, LLC State: CA Sampling Point: TP-2
Investigator(s): Greg Davis Section, Township, Range: 12, T2S, R2W
Landform (hillslope, terrace, etc.): Terrace/Bank Local relief (concave, convex, none): Convex Slope (%): 10
Subregion (LRR): A Lat: 40.3070 Long: -124.2516 Datum: WGS 84
Soil Map Unit Name: 100 NWI classification: R3US A
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 ✓
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Site is upslope of OHWM of Mattole river, some signs of historic flood deposit here (old driftwood/trash)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25 ft²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	25	✓	FAC
2.			
3.			
4.			
	25 = Total Cover		

Sapling/Shrub Stratum (Plot size: 10'x10')			
1. Baccharis pilularis	10	✓	NI
2. Umbellularia californica	5		FAC
3. Cytisus scoparius	10	✓	NI
4. Salix lasiolepis	5		FACW
5.			
	35 = Total Cover		

Herb Stratum (Plot size: 10'x10')			
1. Festuca arundinacea	30	✓	FAC
2. Agrostis stolonifera	20	✓	FACW
3. Vicia sp.	15		FAC
4. Phalaris aquatica	10		FACU
5. Geranium molle	5		NI
6. Artemesia douglasiana	5		FACW
7. Sweet cicely (Osmorhiza)	5		FACU
8. Cynosurus echinatus (berteroi)	5		NI
9. Trifolium sp	5		FAC
10.			
11.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: ____)

1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test Worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (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 ≤3.0¹
___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants¹
___ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Veg. is w/in riparian zone of Mattole river

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
0-2	10YR 3/2	100	-	-	-	-	LS	
2-24	10YR 3/2	100	-	-	-	-	SL	

[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:

over bank deposits from mattole, well drained

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:

Drift deposits present but appear to be from a flood event higher than OHWM, doesn't appear to have high frequency of inundation

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3/3/2021
Applicant/Owner: Avicenna Holdings LLC State: CA Sampling Point: TP-3
Investigator(s): Greg Davis Section, Township, Range: 12, T2S, R2W
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Planar Slope (%): 4
Subregion (LRR): A Lat: 40.3075 Long: -124.2515 Datum: WGS84
Soil Map Unit Name: 100 NWI classification: R3US/4
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 ____	No X	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Site is located w/in riparian dripline of Mattole River and is adjacent to the east of the linear berm running through pasture

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25 x 25)	Absolute % Cover	Dominant Species?	Indicator Status
1 Pseudotsuga menziesii	30	X	NI
2 Alnus oblata	20	X	FAC
3.			
4			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 10 x 10)			
1 Baccharis pilularis	25	X	NI
2 Toxicodendron diversilobum	5		FAC
3.			
4			
5.			
	30	= Total Cover	

Herb Stratum (Plot size: 10 x 10)			
1 Pteridium aquilinum	15	X	FACU
2 Cynosurus echinatus	10	X	NI
3 Holcus lanatus	15	X	FAC
4 Cirsium vulgare	10	X	FACU
5.			
6			
7			
8			
9.			
10.			
11			
	50	= Total Cover	

Woody Vine Stratum (Plot size: 10 x 10)			
1			
2			
		= Total Cover	

% Bare Ground in Herb Stratum: 50

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	25	x 4 =	100
UPL species	65	x 5 =	325
Column Totals	130 (A)		545 (B)

Prevalence Index = B/A = 4.19

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 ____ No X

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
0-4	7.5YR 3/2	100	-	-	-	-	L	
4-16	10YR 4/2	100	-	-	-	-	L	gravelly

[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:

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:

Soil moist @ depth but not saturated (~ 15")

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

Project/Site: APN: 105-121-005 City/County: Petrolia, Humboldt Sampling Date: 3-3-2020
Applicant/Owner: Avicenna Holdings, LLC State: CA Sampling Point: TP-4
Investigator(s): Greg Davis Section, Township, Range: 12, T25, R2W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): A Lat: 40.3072 Long: -124.2526 Datum: WGS84
Soil Map Unit Name: 187 NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X 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 ____ No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No ____
Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Small, 6' x 10' depressional feature. Surface compacted by cattle and appears to be utilized for shade/cover

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25' x 25')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	40	Y	FACW
2. Pseudotsuga menziesii	10	Y	NI
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis pilularis	20	Y	NI
2. Toxicodendron diversilobum	10	Y	FAC
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Unknown grass (no seed heads)	10	Y	FAC
2. Phalaris aquatica	5		FACU
3. Mentha pulegium	10	Y	OBL
4. Cirsium vulgare	5		FACU
5. Sweet alilly	2		FACU
6. Geranium sp. (mallo)	3		NI
7. Trifolium sp.	5		FAC
8. Rumex crispus	5		FACU
9.			
10.			
11.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. Rubus ursinus	20	Y	FACU
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 55

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (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
4 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 √ No ____

Remarks: Riparian vegetation, mostly from cattle compaction

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	Loc	Texture	Remarks
0-6	7.5YR 3/1	100	-	-	-	-	SIL	
6-19	10YR 4/2	100	-	-	-	-	SCL	

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

Lots of cattle compaction and streaks of "organic matter" from years of cow manure

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 ___

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

Remarks:

Small depressional feature, heavy cattle traffic (shade adjacent to pasture) ~6' x 10' feature

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3-3-2020
Applicant/Owner: Avicenna Holdings State: CA Sampling Point: TP-5
Investigator(s): Greg Davis Section, Township, Range: 12, T2S, R2W.
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): A Lat: 40.3084 Long: -124.2514 Datum: WGS84
Soil Map Unit Name: 187 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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: Site is located in center of pasture, area was lush green on aerial imagery compared to rest of field

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: —)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: —)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 x 10)			
1. Vakanum Grass	60	J	FAC
2. Trifolium sp.	15		
3. Geranium molle	10		
4. Vicia sp.	10		
5. Bellis perennis	5		
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (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
- F 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0¹
- ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants¹
- ____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
Pasture is grazed, according to landowner, the field is seeded w/ cover crop. Assuming facultative indicator status for grass to be conservative

SOIL

Sampling Point TP-S

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 3/2	100	-	-	-	-	S.L	
3-16	10YR 4/3	100	-	-	-	-	L	Gravels throughout

[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:

Soil appears to be well drained

No redox observed.

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:

Pasture appears well drained. Hydrology of adjacent TP-1 (@ lower elevation) was dry as well

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3/8/2021
Applicant/Owner: Avicenna Holdings, LLC State: CA Sampling Point: TP-6
Investigator(s): Greg Davis Section, Township, Range: 12, T2S, R2W
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR): A Lat: 40.3084 Long: -124.2514 Datum: WGS84
Soil Map Unit Name: 187 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 ____ No X		

Remarks: Site is located between Conklin Creek road and main pasture. Hillside upslope drains to this location which has established willows along road.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25x25)	Absolute % Cover	Dominant Species?	Indicator Status
1 Salix lasiandra	60	X	FACW
2 Umbellularia californica	20	X	FAC
3			
4			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1 Toxicodendron diversilobum	20	X	FAC
2			
3			
4			
5			
	20 = Total Cover		
Herb Stratum (Plot size: 10 x 10)			
1 Unknown grass	20	X	FAC
2 Mimulus guttatus	5		OBL
3 Cirsium vulgare	5		FACU
4 Verbascum sp.	5		FACU
5			
6			
7			
8			
9			
10			
11			
	= Total Cover		
Woody Vine Stratum (Plot size: 10x10)			
1 Rubus ursinus	15	X	FACU
2			
	15 = Total Cover		

% Bare Ground in Herb Stratum 65

Dominance Test Worksheet
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (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:
No seed heads on grasses, presumed Facultative

SOIL

Sampling Point: TP-6

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	7.5YR 3/1	100	-	-	-	-	Si L	
3-18	7.5YR 4/2	100	-	-	-	-	CL	gravelly

[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:

Similar condition to TP-3

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:

Doesn't pass FAC-neutral test

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

Project/Site: APN: 105-121-003 City/County: Petrolia / Humboldt Sampling Date: 3/3/2021
Applicant/Owner: Avicenna Holdings, LLC State: CA Sampling Point: TP-7
Investigator(s): Greg Davis Section, Township, Range: 12, T2S, R2W
Landform (hillslope, terrace, etc.): Near break in slope Local relief (concave, convex, none): Planar Slope (%): 3
Subregion (LRR): A Lat: 40.3097 Long: -124.2524 Datum: WGS84
Soil Map Unit Name: 187 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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: Site is adjacent to the east of driveway off Conklin Creek Road

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25 x 25)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	70	x	FACW
2.			
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 x 10)			
1. Toxicodendron diversilobum	10	x	FAC
2. Baccharis pilularis	10	x	UPL
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 10 x 10)			
1. Urtica dioica	5	x	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 10 x 10)			
1. Rubus ursinus	10	x	FACU
2.			
	10 = Total Cover		

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (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 ✓ No ____

Remarks: Relatively weed herb stratum

SOIL

Sampling Point: TP-7

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
0-5	10YR 2/1	100	-	-	-	-	Si L	Gravelly
5-14	10YR 3/2	100	-	-	-	-	CL	gravelly
14+	Gravel	-	-	-	-	-	-	-

[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: Gravel / rock

Depth (inches): 14

Hydric Soil Present? Yes _____ No X

Remarks:

Gravelly soils may be indicative of sidecast spoils from the road cut/fill of Conklin Creek Road

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:

Soil is moist @ depth ~ 14" bgs but not saturated

Appendix C

Plant Species List

Avicenna Holdings, LLC Wetland Determination Report

March 2021

Scientific Name	Common Name	Origin	Stratum	Indicator Status
Agrostis stolonifera	Creeping bentgrass	Invasive	Herb	FACW
Alnus rubra	Red alder	Native	Tree	FAC
Artemisia douglasiana	Douglas' wormwood	Native	Herb	FACW
Baccharis pilularis	Coyote brush	Native	Shrub	NI
Bellis perennis	English daisy	Naturalized	Herb	NI
Briza maxima	Rattlesnake grass	Invasive	Herb	NI
Cirsium vulgare	Bullthistle	Invasive	Herb	FACU
Cynosurus echinatus	Bristly dogstail grass	Invasive	Herb	NI
Cytisus scoparius	Scotch broom	Invasive	Shrub	NI
Dactylis glomerata	Orchardgrass	Invasive	Herb	FACU
Elymus caput-medusae	Medusa head	Invasive	Herb	NI
Festuca arundinacea	Reed fescue	Invasive	Herb	FAC
Geranium molle	Crane's bill geranium	Naturalized	Herb	NI
Mentha pulegium	Pennyroyal	Invasive	Herb	OBL
Osmorhiza berteroi	Sweet cicely	Native	Herb	FACU
Phalaris aquatica	Harding grass	Invasive	Herb	FACU
Plantago lanceolata	English plantain	Invasive	Herb	FACU
Pseudotsuga menziesii	Douglas fir	Native	Tree	NI
Rubus ursinus	California blackberry	Native	Vine	FACU
Rumex acetosella	Sheep sorrel	Invasive	Herb	FACU
Rumex crispus	Curly dock	Invasive	Herb	FAC
Salix lasiandra	Pacific willow	Native	Shrub/Tree	FACW
Toxicodendron diversilobum	Poison oak	Native	Shrub	FAC
Trifolium sp.	Clover	Unknown	Herb	FAC
Umbellularia californica	Bay laurel	Native	Tree	FAC
Urtica dioica	Stinging nettle	Native	Herb	FAC
Vicia sp.	Vetch	Unknown	Herb	FAC

Appendix D

NRCS Web Soil Survey Map Unit Descriptions

Avicenna Holdings, LLC Wetland Determination Report

March 2021

Humboldt County, South Part, California

100—Water and Fluvents, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1l9dm
Elevation: 10 to 50 feet
Mean annual precipitation: 40 to 75 inches
Mean annual air temperature: 50 to 59 degrees F
Frost-free period: 300 to 330 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 60 percent
Fluvents and similar soils: 35 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Rivers on channels
Down-slope shape: Concave, linear
Across-slope shape: Linear

Description of Fluvents

Setting

Landform: Point bars on channels
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

A - 0 to 13 inches: gravelly fine sandy loam
C - 13 to 59 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 5w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Other vegetative classification: Riparian & Wetland Vegetation (RNPR001CA)
Hydric soil rating: Yes

Minor Components

Typic udifluvents

Percent of map unit: 4 percent
Landform: Meandering channels
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Rock outcrop

Percent of map unit: 1 percent
Landform: Channels
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

187—Pepperwood-Shivelyflat complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1v5w3
Elevation: 50 to 490 feet
Mean annual precipitation: 40 to 70 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 300 to 350 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pepperwood and similar soils: 60 percent
Shivelyflat and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pepperwood

Setting

Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sedimentary sources

Typical profile

Ap - 0 to 8 inches: fine sandy loam
C1 - 8 to 16 inches: fine sandy loam
C2 - 16 to 28 inches: very fine sandy loam
C3 - 28 to 31 inches: very fine sandy loam
Ab1 - 31 to 50 inches: loam
Ab2 - 50 to 55 inches: silt loam
C4 - 55 to 79 inches: loam

Properties and qualities

Slope: 0 to 2 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 to high (0.60 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: RareNone
Frequency of ponding: Frequent
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): 1
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Shivelyflat

Setting

Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sedimentary sources

Typical profile

Ap - 0 to 9 inches: silt loam
A1 - 9 to 18 inches: silt loam
A2 - 18 to 28 inches: silt loam
C1 - 28 to 47 inches: very fine sandy loam
C2 - 47 to 63 inches: very fine sandy loam
C3 - 63 to 71 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly 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: About 10 to 20 inches
Frequency of flooding: RareNone
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Eelriver

Percent of map unit: 5 percent
Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Cottoneva

Percent of map unit: 3 percent
Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Weott

Percent of map unit: 2 percent
Landform: Backswamps, depressions, flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Humboldt County, South Part, California

569—Crazycoyote-Windynip-Caperidge complex, 15 to 50 percent slopes

Map Unit Setting

National map unit symbol: 1lpq6
Elevation: 200 to 3,280 feet
Mean annual precipitation: 60 to 100 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Crazycoyote and similar soils: 38 percent
Windynip and similar soils: 32 percent
Caperidge, warm, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crazycoyote

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear, concave, convex
Across-slope shape: Linear
Parent material: Colluvium and/or residuum derived from sandstone and mudstone

Typical profile

Oi - 0 to 2 inches: gravelly slightly decomposed plant material
A - 2 to 6 inches: gravelly loam
Bt1 - 6 to 13 inches: gravelly loam
Bt2 - 13 to 39 inches: gravelly clay loam
Bt3 - 39 to 47 inches: very gravelly clay loam
Bt4 - 47 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Windynip

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical profile

A1 - 0 to 4 inches: loam
A2 - 4 to 10 inches: gravelly clay loam
AB - 10 to 24 inches: gravelly clay loam
Bt1 - 24 to 35 inches: gravelly clay loam
Bt2 - 35 to 51 inches: very gravelly clay loam
Bt3 - 51 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 15 to 50 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Caperidge, Warm

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank

Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Colluvium derived from sandstone and/or residuum weathered from sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A1 - 1 to 6 inches: very gravelly loam
A2 - 6 to 23 inches: very gravelly loam
Bt - 23 to 35 inches: extremely gravelly loam
CBt - 35 to 55 inches: extremely gravelly sandy loam
C - 55 to 69 inches: extremely cobbly sandy loam

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Wirefence

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sproulish

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Yorknorth, moist

Percent of map unit: 2 percent

Landform: Mountain slopes
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

Devilshole

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

Appendix E

Photo Documentation

Avicenna Holdings, LLC Wetland Determination Report

March 2021

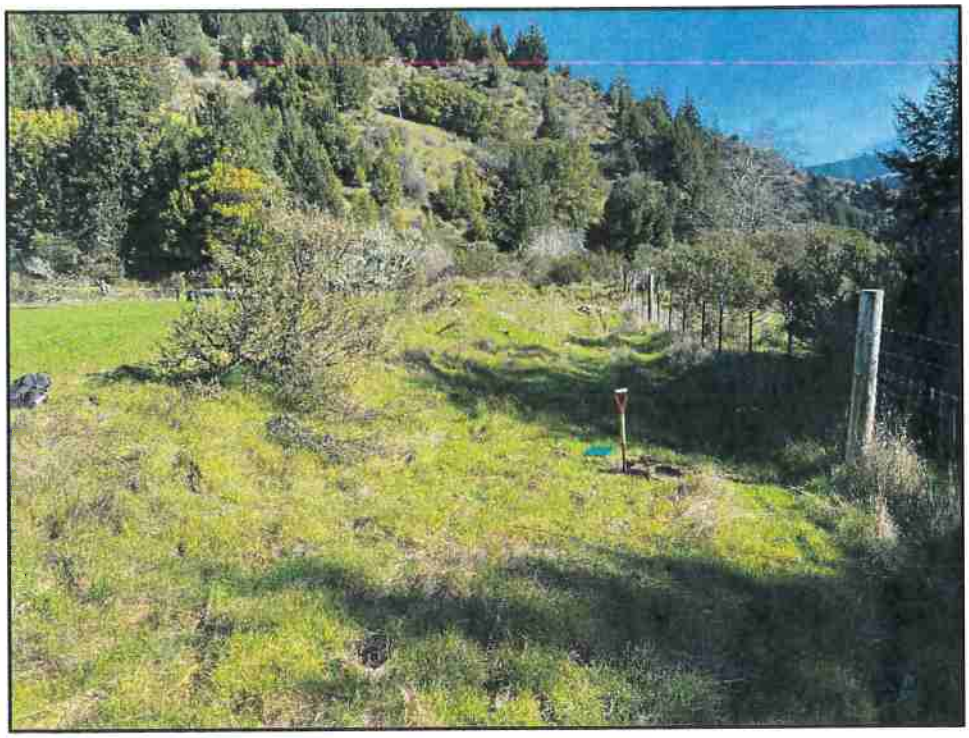


Photo 1. View of the TP-1 sampling location at the eastern edge of the pasture.

Photo 2. View of the soil profile at TP-1 lacking hydric soil indicators.

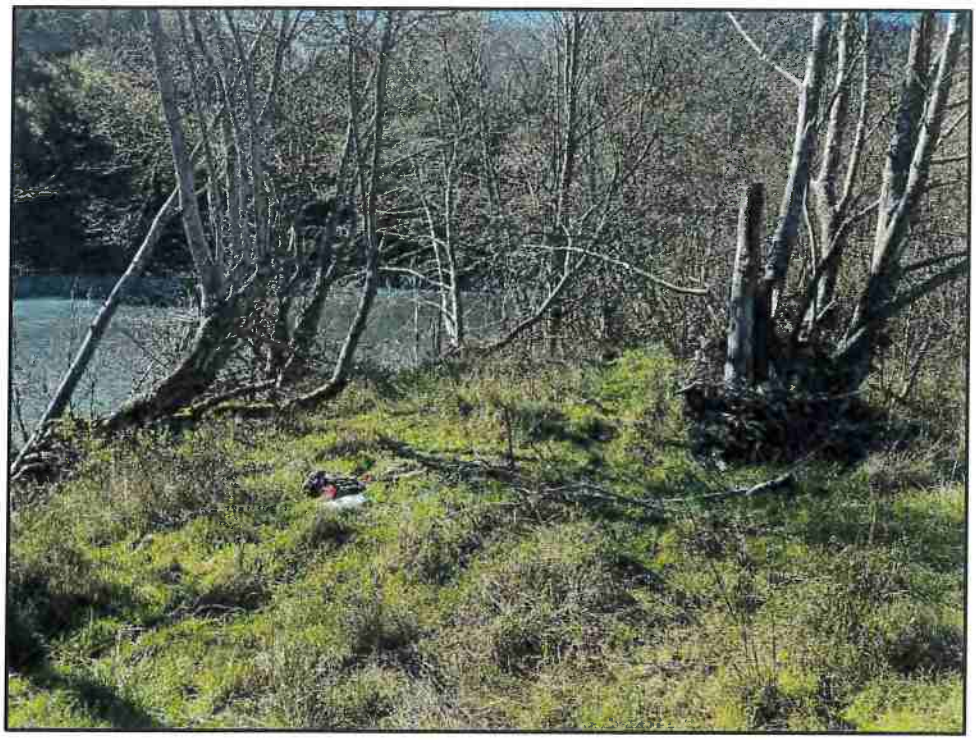


Photo 3. View of the TP-2 sampling location with the Mattole River in the background.

Photo 4. View of the soil profile at TP-2 lacking hydric soil indicators.

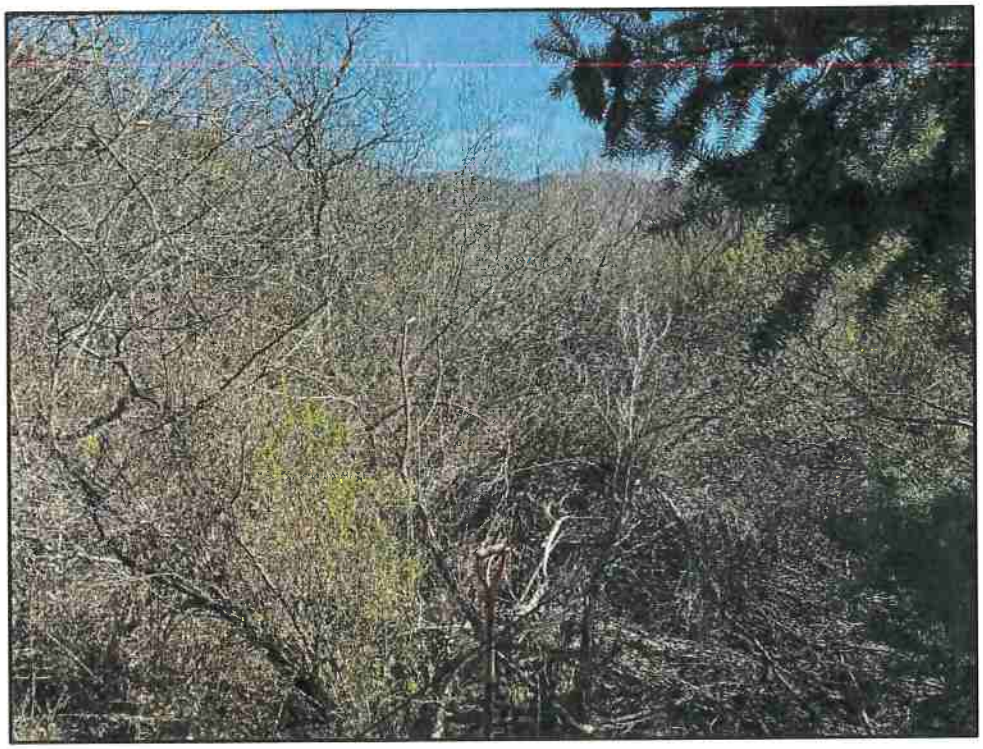


Photo 5. View of the TP-3 sampling location.

Photo 6. View of the soil profile at TP-3 lacking hydric soil indicators.

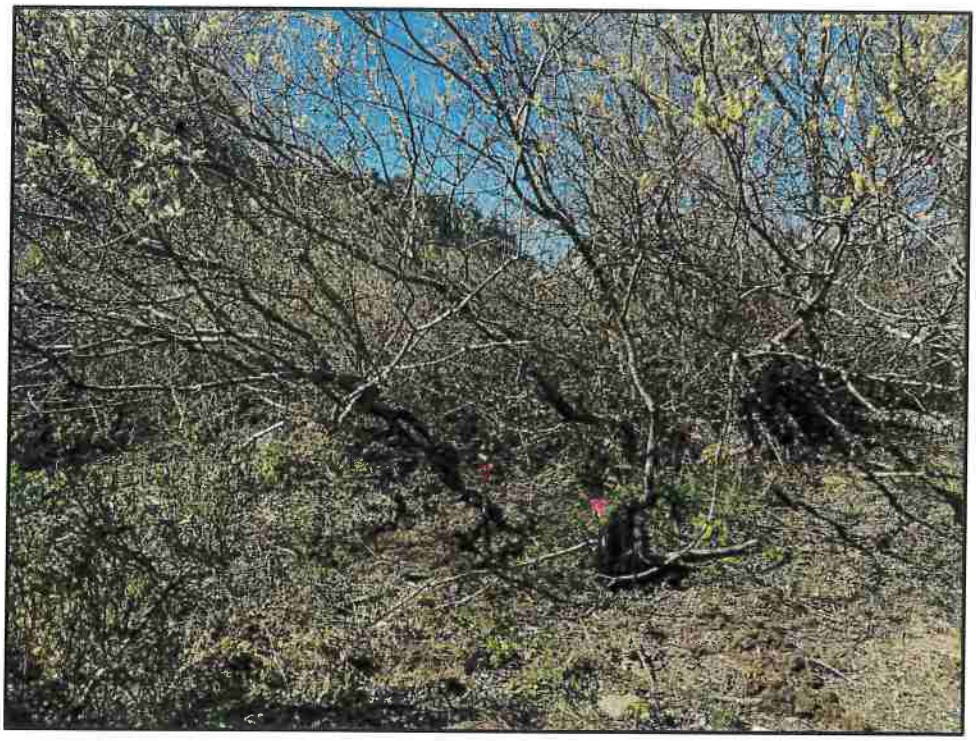


Photo 7. View of the TP-4 sampling location at the southern edge of the pasture.

Photo 8. View of the soil profile at TP-4 lacking hydric soil indicators.

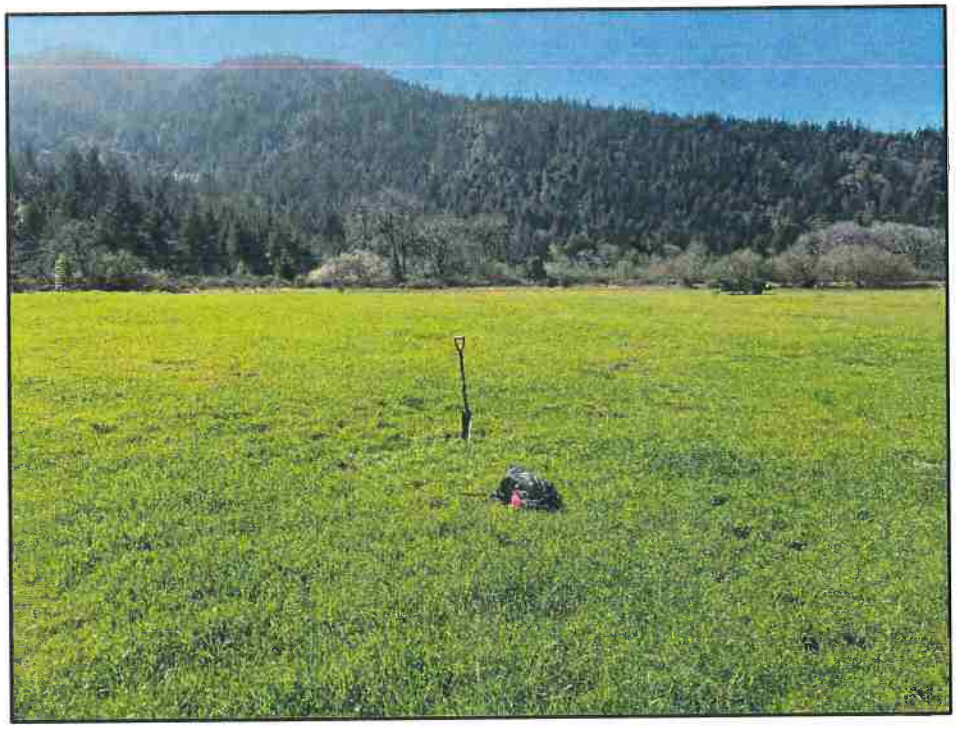


Photo 9. View of the TP-5 sampling location within the main pasture.

Photo 10. View of the soil profile at TP-5 lacking hydric soil indicators.

Photo 11. View of the TP-6 sampling location between the main pasture and Conklin Creek Road.

Photo 12. View of the soil profile at TP-6 lacking hydric soil indicators.

Photo 13. View of the TP-7 sampling location between the main pasture and Conklin Creek Road.

Photo 14. View of the TP-7 sampling location relatively void of an herbaceous understory.

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
Division Environmental Health	✓	Conditional approval	Attached
Public Works, Land Use Division	✓	Conditional approval	Attached
Cal FIRE	✓	Note	Attached
California Department of Fish & Wildlife	✓	Note	Attached
Northwest Information Center	✓	Note	On file and confidential
Sheriff	✓	Approval	Attached
Building Inspection	✓	Note	Attached
Bear River Band of the Rohnerville Rancheria		No Response	
Intertribal Sinkyone Wilderness Council		No response	
Mattole Union School District		No Response	
CA State Water Resources Control Board – Division of Water Rights		No response	
NCUAQMD		No response	
District Attorney		No response	
Ag Commissioner		No response	
RWCQB		No response	
District Attorney		No Response	
Petrolia Fire Protection District		No Response	
PG&E		No Response	

PLN-2020-16633
Avicenna Holdings, LLC - 43,560 sq ft outdo...
An application for a Special Permit to condu...

STATUS
Staff Report
04/14/2021 by Anna Colegrove-Powell

LOCATION
2001 Conklin Creek Rd
Petrolia, CA 95558

CONTACT
Avicenna Holdings, LLC

WORKFLOW
19 total Task
1 completed 4 active

- Summary
- Project Description
- Workflow
- 1 Referral Assignments
- 2 Planning Information
- 3 GP / Zoning Information
- 4 CEQA
- 5 Cannabis
- Project Tracking
- 6 Referral Task Log (2)
- Fee (7)
- Payment
- **Workflow History (31)**

A notice was added to this record on 2020-07-13.
Condition: Parcel Status : 105-111-007 1:M Severity: Notice
Total conditions: 3 (Notice: 3)

View notice

Cancel Help

Task Environmental Health	Due Date	Assigned Date
Assigned to Department Environmental Health	Assigned to	Status Approved with Conditions
Action by Department Environmental Health	Action By Joey Whittlesey	Status Date 09/23/2020
Start Time	End Time	Hours Spent 0.0
Billable No	Overtime No	Comments Previous WF Value: Approved with Conditions. Previous Comment: Seasonal cultivation without processing may use portable toilets to serve the operation. Permittee shall provide portable toilet(s) to cultivation areas, meeting appropriate setbacks per Humboldt County Code, or install a permitted onsite wastewater treatment system associated with a permitted structure.
Time Tracking Start Date	Est. Completion Date	In Possession Time (hrs)
Display E-mail Address in ACA No	☐ Display Comment in ACA	Comment Display in ACA ☐ All ACA Users ☐ Record Creator ☐ Licensed Professional ☐ Contact ☐ Owner
Estimated Hours 0.0	Action Updated	Workflow Calendar Workflow Blockout

16633 105-111-007

Application Number Key APN

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

- [x] The Department has no comment at this time.
- [ ] Suggested conditions attached.
- [ ] Applicant needs to submit additional information. List of Items attached.
- [ ] Recommend denial.
- [ ] Other comments.

Forester Comments: Date: 10/21/21 Name: Lucas Titus

No comments

Battalion Chief Comments: Date: Name:

Summary:

Paul, Gayle

From: Luther, Stephen
Sent: Tuesday, October 27, 2020 9:37 AM
To: Planning Clerk
Subject: FW: Avicenna Holdings, LLC; PLN-2020-16633; APN 105-111-007

Please post CDFW referral comments.

Stephen Luther
Planner, Cannabis Division
Planning and Building Department
707.268.3737

From: O'connell, Gregory@Wildlife <Gregory.OConnell@Wildlife.ca.gov>
Sent: Monday, October 26, 2020 3:39 PM
To: Luther, Stephen <SLuther@co.humboldt.ca.us>
Cc: Johnson, Cliff <CJohnson@co.humboldt.ca.us>
Subject: Avicenna Holdings, LLC; PLN-2020-16633; APN 105-111-007

Hi Stephen.

I'm writing to provide some preliminary comments for the Avicenna Holdings, LLC project (PLN-2020-16633) on APN 105-111-007 in the Petrolia area. The project is for 43,560 sq ft of outdoor cannabis cultivation.

1. It appears the County's Accella database has a Lake or Streambed Alteration (LSA) Notification for this parcel. I could not find record of CDFW receiving an LSA notification, so it appears the file you have was never submitted to CDFW.

2. Please clarify the relationship between PLN-2020-16633 (listed as APN 105-111-007) and BLD-2020-52090 (APN 105-121-003). Accela suggests the BLD-2020-52090 County application is for construction of an "Ag Exempt barn/storage w/new 100 amp electric service (non-cannabis use)", but the plot plans for PLN-2020-16633 and BLD-2020-52090 appear to show the same vicinity for development. It may make sense to lump these together into PLN-2020-16633.

3. Regarding CDFW's CEQA role as Trustee Agency for all fish and wildlife resources, please ensure that the project documents adequately address questions posed in CEQA Guidelines Appendix G (Environmental Checklist) and other issues that may result in potentially significant impacts. Some of these questions include:

    a. Guidelines Section IV(a) asks, Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
        i. CDFW produces regular updates to our Special Plant and Animal Lists
        ii. A convenient way to narrow down the hundreds of special status animals and thousands of special status plants on CDFW's Special Plant and Animal Lists is to conduct a 9-quad search in CNDDB using the free QuickView Tool to start a scoping list for species reported from the area. Special status plants in a project area may not be limited to those on the list.

iii. For botanical resources, please refer to CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities .
iv. Please refer to CDFW's website for additional Survey and Monitoring Protocols and Guidelines.

b. Guidelines Section IV(b) asks, Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
   i. CDFW anticipates that the County will address riparian habitat as part of implementation of the County's Streamside Management Area and Wetland Ordinance (SMAWO) and related sections of the 2017 General Plan update. It appears the County's GIS layer of the SMAWO area in this location needs a site specific evaluation.
   ii. Sensitive Natural Communities should be addressed in accordance with CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities and the Vegetation Classification and Mapping Program.

c. Guidelines Section IV(c) asks, Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
   i. Based on aerial imagery, it appears wetlands may exist within areas of direct or indirect project effects. I recommend a protocol wetland delineation occur in conformance with the State Water Resources Control Board's Statewide Wetland Definition and Procedures. CDFW recommends avoidance of wetland impacts.
   ii. It appears a portion of this parcel occurs in within the 100-year flood zone. CDFW recommends avoidance of non-essential infrastructure within flood plains.

d. Guidelines Section IV(d) asks, Would the project Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
   i. Addressing this question will likely require an evaluation from a qualified biologist.

4. If the project proceeds, I recommend that some elements of habitat conservation be added as part of the project or a condition of approval. I'm happy to talk further on this, but potential examples include:
   a. stream restoration
   b. wetland restoration
   c. native grassland restoration
   d. oak woodland restoration.

Feel free to contact me if you have questions, need clarification, or if there are other ways I can be helpful. Please save these preliminary comments to the project folder and Accela database.

Thanks,

Greg O'Connell
Environmental Scientist
Coastal Conservation Planning
California Department of Fish and Wildlife
619 Second Street
Eureka, CA 95501
Gregory.OConnell@Wildlife.ca.gov