



COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES

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MEMORANDUM

DATE: JUNE 15, 2023
TO: PLANNING COMMISSION
FROM: PLANNING AND BUILDING SERVICES, MARK CLISER, PLANNER II
SUBJECT: RE: U 2022-0007 MODIFICATION TO STAFF REPORT, RESOLUTION, AND INITIAL STUDY; WATER AVAILABILITY ANALYSIS

The Mendocino County Department of Planning & Building Services (PBS) would like to correct errors in the Staff Report, Resolution, and Initial Study for Use Permit U_2022-0007, and submit additional information received regarding water availability.

- **Staff Report:** Page 4 omitted the date comments from the Mendocino County Cannabis Department were received. Comments were received on April 24, 2023.
- **Resolution:** Exhibit A of the Resolution failed to include language on appeal period. A new condition (Condition of Approval Number 1) has been inserted. This condition reads:
 - *The permit shall become effective on the 11th day after Planning Commission approval and shall expire and become null and void at the expiration of two years after the effective date June 26, 2025 except where use of the property in reliance on such permit has been initiated prior to its expiration.*

This rennumbers all subsequent conditions.

- **Initial Study & Resolution:** Project Request on page 1 of the Initial Study and Project Description on page 1 of Exhibit A incorrectly state the total cultivation canopy as 10,000 square feet. This has been corrected to 2,500 square feet.
- **Water Availability Analysis:** Staff received additional information regarding water availability on the subject parcel. This new information highlights groundwater levels at time of testing. Water requirements for Phase Three permits are addressed in 10A.17.080(C). Section (1)(b) states:
 - *If groundwater not influenced by surface water will be used, the applicant may demonstrate that there is adequate water by providing a water availability analysis which will address the adequacy of the proposed water supply, the direct effects on adjacent and surrounding water users, and possible cumulative adverse impacts of the development on the water supply within the watershed and show there is a sustained yield to support the proposed level of use*

The Department of Environmental Health requires inland water testing must be done between August 20 to October 31 for wells less than 40 feet in alluvium or marine terrace deposits, or less than 60 feet in bedrock. The subject well is 43 feet and located in soils comprised of Quinliven-Ferncreek complex and Ferncreek sandy loam (see

Attachment E – Western Soil Classes). Both soil types are associated with marine terraces (see Attachment F – Mendocino County Western Soil Survey). The project was referred to the Department of Environmental Health on October 6, 2022. A “no comment” was received on 12/6/2022.

ATTACHMENTS:

- A. Revised Resolution & Exhibit A
- B. Addendum to Water Availability Analysis
- C. Western Soil Classes Map
- D. Mendocino County Western Soil Survey

Resolution Number _____

County of Mendocino
Ukiah, California

JUNE 15, 2023

U_2022-0007 – WILLIAM HAYES

RESOLUTION OF THE PLANNING COMMISSION, COUNTY OF MENDOCINO, STATE OF CALIFORNIA, ADOPTING A MITIGATED NEGATIVE DECLARATION AND GRANTING A MINOR USE PERMIT U_2022-0007 FOR CANNABIS CULTIVATION.

WHEREAS, the Applicant, WILLIAM HAYES, filed an application for a Minor Use Permit with the Mendocino County Department of Planning and Building Services to establish a Type C-A Cottage-Size Indoor Cultivation Permit (AG_2022-0003) for cannabis cultivation of no more than 2,500 square feet of canopy within one (1) structure, 3.6± miles east of Mendocino town center, lying on the south side of Little Lake Rd. (CR 408), 0.1± miles east of its intersection with Outlaw Springs Rd. (Private), addressed at 8261 Outlaw Springs Rd., Mendocino (APN: 119-490-19). General Plan RR10; Zoning RR:10; Supervisorial District 5; (the “Project”); and

WHEREAS, an Initial Study and draft Mitigated Negative Declaration was prepared for the Project and noticed and made available for agency and public review on May 7, 2023 in accordance with the California Environmental Quality Act (CEQA) and the State and County CEQA Guidelines; and

WHEREAS, in accordance with applicable provisions of law, the Planning Commission held a public hearing on June 15, 2023 at which time the Planning Commission heard and received all relevant testimony and evidence presented orally or in writing regarding the Project and Mitigated Negative Declaration. All interested persons were given an opportunity to hear and be heard regarding the Project and Mitigated Negative Declaration; and

WHEREAS, the Planning Commission has had an opportunity to review this Resolution and finds that it accurately sets forth the intentions of the Planning Commission regarding the Project and Mitigated Negative Declaration.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission, based upon the evidence in the record, makes the following findings:

1. **General Plan and Zoning Findings:** The subject parcel is classified Rural Residential with a ten acre minimum parcel size (RR10:) under the Mendocino County General Plan and the Project is consistent with the intent of the designation. Although the Project does not entail the farming of food, the sale of the proposed cannabis cultivation is small and thus conforms to the intent of the RR10: land use designation. Additionally, the subject parcel is consistent with the intent of the zoning district and the uses subject to a use permit per Section 20.242.060(C) of the Mendocino County Code; and
2. **Cannabis Cultivation Sites Chapter 20.242**

Mendocino County Code section 20.242.070(D) requires special findings be made for Minor Use Permit applications for cannabis cultivation sites as follows:

- (1) The proposed cannabis cultivation site is in compliance with the provisions of Chapter 10A.17.

Staff has reviewed the proposed project for compliance with the requirements set forth in Chapter 10A.17, Mendocino Cannabis Cultivation Ordinance. Staff referred the project to

the Mendocino County Cannabis Department (MCCD) on April 21, 2023. Comments received from MCCD on (date) note the project is in full compliance with the provisions of MCC Chapter 10A.17.

- (2) In cases where there is no other environmentally superior cultivation site located on the same parcel, the location and operation of the cannabis cultivation site will, to the maximum extent feasible, avoid or minimize its impact on environmentally sensitive areas including hillsides exceed fifteen (15) percent, prime soil, oak woodland, and timber resources.

Staff finds that the project would not be located on slopes exceeding 15 percent and the indoor cultivation structure would not result in the removal of additional trees or vegetation.

- (3) The proposed cannabis cultivation site will avoid or minimize odor and light impact on residential uses.

Based on a review of the application and supplemental materials, Staff finds that the project would avoid or minimize odor and light impact on residential uses, since all setbacks and development criteria will be achieved, and the nearest residence is located over 100 feet from the cultivation area.

- (4) For any new cannabis cultivation site established after January 1, 2020 and that is not located in the AG (Agriculture) Zoning District, the submitted MCCO permit application contains evidence that demonstrates: (1) there is adequate water supply in the watershed and water rights to serve the cultivation site; (2) the cultivation site has received a Clean Water Act Section 404 permit from the Army Corps of Engineers or a Clean Water Act Section 401 permit from the North Coast Regional Water Quality Control Board, as applicable, and a General Permit for Discharges of Storm Water from the State Water Resources Control Board.

Based on review of the May 27, 2022 Evaluation Of Adequacy Of Groundwater Supply For Cannabis Cultivation submitted by Lawrence & Associates the applicant has demonstrated adequate water supply in the watershed and water rights to serve the cultivation site (see Initial Study attachment B – Groundwater Study)). The Mendocino County Cannabis Department has provided permit documentation from the North Coast Regional Water Quality Control Board regarding a General Permit for Discharges of Storm Water (see Attachment L). Condition of Approval number 19 requires the applicant submit to Mendocino County Planning and Building Services evidence of a Clean Water Act Section 401 permit prior to issuance of a building permit.

- (5) The Use Permit granted for the cannabis cultivation site shall be limited to a period not to exceed ten (10) years. The Use Permit shall expire at the end of this period unless it is renewed prior to the end of the 10-year period, or at any time the approved MCCO permit for the cultivation site expires or is revoked.

Condition of Approval Number 2 limits the period for this Use Permit to ten (10) years and requires the applicant renew prior to the expiration date of June 15, 2033.

3. **Use Permit Findings:** The Project satisfies the Use Permit required findings per Section 20.196.020 of the Mendocino County Code; and

- a. That the establishment, maintenance or operation of a use or building applied for is in conformity to the General Plan;

The project would facilitate the an indoor cannabis cultivation site. Cannabis cultivation is allowed within the Rural Residential (RR) General Plan designation. With the inclusion of the

recommended conditions of approval, the project is found consistent with Mendocino County policies for cannabis cultivation, and in conformance with the Mendocino County General Plan.

- b. That adequate utilities, access roads, drainage and other necessary facilities have been and are being provided;

The proposed project site has a well system that will be used for the operation. Additional water storage tanks are proposed. The on-site permitted septic will not be used for wastewater generated by the proposed project. The project site is connected to local utilities for power and the Applicant is in the process of obtaining solar power for the property. Adequate access is gained via Outlaw Springs Road (Private).

- c. That such use will not, under the circumstances of that particular case, constitute a nuisance or be detrimental to the health, safety, peace, morals, comfort or general welfare of persons residing or working in or passing through the neighborhood of such proposed use, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the county; provided, that if any proposed building or use in necessary of the public health, safety or general welfare, the finding shall be to that effect;

Given that improvements proposed will not be visible to adjacent properties; that the cultivation will be conducted within a metal structure that does not have glass and will allow for better mitigation of smell and light concerns; that the applicant has previously operated in a similar capacity with regards to cultivation on a different parcel without complaints from neighbors; and that all setbacks for cultivation activities meet or exceed the requirements as identified by Mendocino County Code Section 10A.17.040(6)(a); and with the incorporation of agency conditions, this finding can be made.

- d. That such use preserves the integrity of the zoning district.

Mendocino County Code Chapter 20.242 was established with the intent to allow for cultivation of cannabis in locations that are consistent with the intent of the base zoning district. Through granting a Minor Use Permit to authorize the proposed cannabis cultivation site per Section 20.242.060(C) of the Mendocino County Code, and as conditioned, the project would be in conformance with the Rural Residential (RR:10) zoning district and would not undermine the integrity of the zoning district.

4. **Environmental Protection:** Staff has completed an Initial Study for the proposed project in accordance with the California Environmental Quality Act (CEQA) and determined that the project could have some potential significant impacts on the environment but can be considered less than significant with mitigation incorporated. As discussed in the Initial Study, conditions have been identified to mitigate impacts to the environment to a less than significant level. Staff recommends that the Planning Commission adopt a Mitigated Negative Declaration for the project.
5. **Cultural Resources:** The project was referred to the Northwest Information Center (NWIC) at Sonoma State University for review and comment and a response was provided on October 21, 2022. Based on NWIC's record, the proposed project area has the possibility of containing unrecorded archaeological site(s) and a study was recommended. The project was also referred to three local tribes for review and comment, including the Cloverdale Rancheria, Sherwood Valley Band of Pomo Indians, and the Redwood Valley Little River Band of Pomo Indians. As of February 13, 2023, no responses were received from the three local representatives contacted; no comments on the project were provided. An Archaeological Survey Report prepared by Alta Consulting was reviewed by the Mendocino Archaeological Commission at its March 8, 2023, meeting. The survey report was accepted with inclusion of the Discovery Clause, which prescribes the procedures after discovery of any cultural resources during construction of the project.

BE IT FURTHER RESOLVED that the Planning Commission hereby adopts the Mitigated Negative Declaration. The Planning Commission certifies that the Mitigated Negative Declaration has been completed, reviewed, and considered, together with the comments received during the public review process, in compliance with CEQA and State and County CEQA Guidelines, and finds that the Mitigated Negative Declaration reflects the independent judgment and analysis of the Planning Commission.

BE IT FURTHER RESOLVED that the Planning Commission hereby grants the requested Minor Use Permit subject to the Conditions of Approval in Exhibit "A", attached hereto.

BE IT FURTHER RESOLVED that the Planning Commission designates the Secretary as the custodian of the document and other material which constitutes the record of proceedings upon which the decision herein is based. These documents may be found at the office of the County of Mendocino Planning and Building Services, 860 North Bush Street, Ukiah, CA 95482.

BE IT FURTHER RESOLVED that the Planning Commission action shall be final on the 11th day after the date of the Resolution unless an appeal is taken.

I hereby certify that according to the Provisions of Government Code Section 25103 delivery of this document has been made.

ATTEST: JAMES F. FEENAN
Commissioner Service Supervisor

BY: DIANA WIEDEMANN,
Chair

By: _____

Mendocino County Planning

BY: JULIA KROG,
Director

EXHIBIT A

CONDITIONS OF APPROVAL AND MITIGATION MEASURES

JUNE 15, 2023

U_2022-0007 – WILLIAM HAYES

APPROVED PROJECT DESCRIPTION: Minor Use Permit for an indoor cannabis cultivation (Type C-A (2500 square feet); AG_2022-0003) site of no more than 2,500 square feet of canopy per MCC Section 20.242.060(C). At all times, the subject property is limited to a total cultivation canopy of ~~10,000~~2,500 square feet.

CONDITIONS OF APPROVAL AND MITIGATION MEASURES: (Mitigation Measures are indicated by “**”)

General:

1. The permit shall become effective on the 11th day after Planning Commission approval and shall expire and become null and void at the expiration of two years after the effective date June 15, 2025 except where use of the property in reliance on such permit has been initiated prior to its expiration.
2. The use of the premises shall be established and maintained in conformance with the provisions of Title 20 of the Mendocino County Code unless modified by conditions of the use permit.
3. This permit is issued for a period of ten years, and shall expire on June 15, 2033. The applicant has the sole responsibility for renewing this permit before the expiration date. The county will not provide a notice prior to the expiration date.
4. The application along with supplemental exhibits and related material shall be considered elements of this entitlement and that compliance therewith be mandatory unless a modification has been approved by the Planning Commission.
- 5.4. This permit shall be subject to revocation or modification by the Planning Commission upon a finding of any 1 or more of the following grounds:
 - a. That such permit was obtained or extended by fraud.
 - b. That one or more of the conditions upon which such permit was granted have been violated.
 - c. That the use for which the permit was granted is so conducted as to be detrimental to the public health, welfare or safety, or as to be a nuisance.

Any such revocation shall proceed as specified in Title 20 of the Mendocino County Code.

~~5.6.~~ This permit is issued without a legal determination having been made upon the number, size or shape of parcels encompassed within the permit described boundaries. Should, at any time, a legal determination be made that the number, size or shape of parcels within the permit described boundaries are different than that which is legally required by this permit, this permit shall become null and void.

~~6.7.~~ Conditions approving U_2022-0007 shall be attached to any building permit application and shall be a part of on-site construction drawings.

~~7.8.~~ This permit is subject to the securing of all necessary permits for the proposed development and eventual use from County, State and Federal agencies having jurisdiction. Any requirements imposed by an agency having jurisdiction shall be considered a condition of this permit.

~~8-9.~~ It shall be the responsibility of the Applicant to ensure that contractors engaged to perform work on the site are aware of the conditions of this permit and that all work performed is in compliance with applicable conditions.

~~9-10.~~ Prior to any construction, the Applicant shall adhere to CAL FIRE Fire Safe Regulations provided to the Mendocino County Department of Planning and Building Services with an approved State Fire Safe Regulation Application Form. The applicant shall comply with those recommendations of the California Department of Forestry (CAL FIRE) or other alternatives as acceptable to CAL FIRE. A Final Clearance letter from CAL FIRE shall be submitted to the Department of Planning and Building Services stating that compliance with their requirements have been met to their satisfaction.

Transportation:

~~40-11.~~ Applicant shall obtain an encroachment permit from the Mendocino County Department of Transportation for any work within County rights-of-way.

Aesthetics:

~~1244.~~ All external lighting shall be shielded and downcast to prohibit light from being cast beyond the property boundaries. Outdoor lighting shall be turned off at 7:00 p.m. in the evenings and not be turned back on until the following day after 6:00 a.m. in the morning. (Twenty-four hour security lighting would be exempt from this time requirement; however any exterior security lighting installed on the property shall utilize motion-sensor activation.) All lighting along the property boundaries shall be setback a minimum of 20 feet from all property lines. Indoor lighting shall be fully contained and shall not encroach onto adjacent properties or skyward.

~~42-13.~~ The Applicant shall provide a lighting plan to Planning and Building Services prior to initial cultivation activities demonstrating that that proposed cultivation area would not deliver or have the potential to deliver light pollution, during the hours of sunset to sunrise, which may affect fish and/or wildlife directly, or from a distance.

~~43-14.~~ No signage shall be allowed for the operation.

Air Quality:

~~44-15.~~ Open-Outdoor burning of cannabis waste products is prohibited by Air Quality.

~~45-16.~~ The access road and interior circulation routes shall be treated with a dust suppressant and maintained in such a manner as to insure minimum dust generation subject to the Air Quality Management District's dust regulations.

~~46-17.~~ The Applicant shall secure any required permits from the Mendocino County Air Quality Management District and submit said permits, or evidence that none are required, to Mendocino County Planning and Building Services.

Biological Resources:

~~47-18.~~ Removal of any commercial tree species, as defined by California Code of Regulations section 895.1 (Commercial Species for the Coast Forest District and Northern Forest District), and the removal of any true oak species (*Quercus sp.*) or Tan Oak (*Notholithocarpus sp.*) for the purpose of developing the cannabis cultivation site shall be prohibited. This prohibition shall not include the pruning of any such trees for maintenance, or the removal of such trees if necessary to safety or disease concerns, or if required by CAL FIRE for the purposes of fire suppression.

~~48-19.~~ This entitlement does not become effective or operative and no work shall be commenced under this entitlement until the California Department of Fish and Wildlife filing fees

required or authorized by Section 711.4 of the Fish and Game Code are submitted to the Mendocino County Department of Planning and Building Services. Said fee of \$ 2,815.00 OR CURRENT FEE shall be made payable to the Mendocino County Clerk and submitted to the Department of Planning and Building Services prior to June 25, 2023 (within 5 days of the end of any appeal period). Any waiver of the fee shall be on a form issued by the Department of Fish and Wildlife upon their finding that the project has “no effect” on the environment. If the project is appealed, the payment will be held by the Department of Planning and Building Services until the appeal is decided. Depending on the outcome of the appeal, the payment will either be filed with the County Clerk (if the project is approved) or returned to the payer (if the project is denied). Failure to pay this fee by the specified deadline shall result in the entitlement becoming null and void. **The applicant has the sole responsibility to ensure timely compliance with this condition.**

Cultural Resources:

19-20. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the applicant shall cease and desist from all further excavation and disturbances within 100 feet of the discovery, and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.

Hydrology:

20-21. A completed Lake or Streambed Alteration Agreement (LSAA) may be required from the California Department of Fish and Wildlife (CDFW) for the project, including, but not limited to: diversion and use of water from a river, and potentially water use from springs. The pond may also be utilized as a source of water in case of emergency. Surface water sources (streams, springs, and hydrologically connected wells and ponds) are generally jurisdictional for CDFW, and their use, for domestic purposes or otherwise, generally requires notification pursuant to Fish and Game Code 1602. Please note that existing jurisdictional projects or infrastructure that does not have a valid or current LSAA will likely require notification (e.g. existing stream crossings on roads). Please contact the local regional CDFW office to determine if a LSAA is necessary for the proposed project.

21-22. The applicant shall submit to Mendocino County Planning and Building Services proof of a Clean Water Action Section 401 permit from the North Coast Regional Water Quality Control Board prior to issuance of any building permits associated with Minor Use Permit U_2022-0007

Noise:

22-23. Construction shall be limited to the hours of 8:00 a.m. to 5:00 p.m.

Building Inspection & Environmental Health:

23-24. The applicant shall secure all necessary permits as required by the Building Inspection Division of the Department of Planning and Building Service and the Division of Environmental Health.

24-25. Current California Business & Professions Code requires a licensed engineer to design, approve, stamp and sign all commercial structures. For all indoor cultivation facilities, the applicant shall identify the source of electrical power and plan for compliance with applicable Building Codes.

25-26. The applicant shall provide documentation to the Mendocino County Cannabis Department that outlines the handling of waste discharge from the grow location of items including, but not limited to nutrients, spent growing media, un-used containers and other associated hardware, supplies, and garbage.

~~26-27.~~ If applicable, a site accessibility plan shall be submitted into the Building Department that shows the placement of all site features as required by California Building Code: Chapter 11-B. This shall be "wet-stamped" by a design professional and shall address (at a minimum) site arrival parking, signage, restrooms, path of travel (to/through the building), workspace designations/dimensions, and interior environment.

~~27-28.~~ Any Building Permit request shall include the conditions of U_2022-0007 attached to or printed on all plans submitted.

Mitigation Measures:

~~28-29.~~ ** During construction, staging areas or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other material that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles and heavy equipment.

~~29-30.~~ ** The permit holder shall operate in full compliance with fire safety rules and regulations and instruct all project workers that the project involves working adjacent to flammable vegetation. All activities shall be performed in a safe and prudent manner with regards to fire prevention.

~~30-31.~~ ** Vehicles and equipment shall be maintained and operated in a manner to prevent hot surfaces, sparks or any other heat sources from igniting grasses, brush or other highly combustible material.

~~31-32.~~ ** Any buildings, including greenhouses, used for the cultivation of cannabis shall be equipped with filtered ventilation systems, permitted by the Mendocino County Air Quality Management District (MCAQMD).



022040.00

June 5, 2023

Mr. Noah Sheppard
P.O. Box 112
Albion, CA 95410

Dear Mr. Sheppard:

**SUBJECT: **RESPONSE TO COMMENT ON EVALUATION OF ADEQUACY OF GROUNDWATER
SUPPLY FOR CANNABIS CULTIVATION, APN 119-049-019, OUTLAW SPRINGS
ROAD, MENDOCINO, CALIFORNIA****

INTRODUCTION

As requested by Mr. William Hayes, this letter responds to a comment you received on our report of May 2022 regarding testing of the well at 8261 Outlaw Springs Road, APN 119-049-019, Mendocino County, California. Our May 2022 test involved an eight-hour constant-discharge aquifer test (at 3.73 gallons per minute, gpm), a recovery test, and data analysis and interpretation.

Our conclusion was that the well had sufficient long-term yield (0.9 gpm) to supply the Project demand for cannabis cultivation of approximately 0.8 gpm without adverse effects on neighboring wells or the aquifer as a whole.

SUMMARY

The period preceding May 2022 was approximately 32% drier than the typical period preceding an August testing period (11.86 vs. 17.41 inches of rain). Thus, the testing in May 2022 was done in drier conditions than typically would be expected for testing in August or September.

Water levels in the Site well in September 2005 (towards the end of a wet period) and May 2022 were essentially the same (approximately 20.5 feet in both periods). The precipitation in 2004 plus 2005 was 79.35 inches; the precipitation in 2021 and 2022 was 47.44 inches, or 60% of the 2004/2005 total. The similarity in groundwater levels suggests that groundwater level in this well does not fluctuate significantly between wet and dry periods.

Based on the dry conditions preceding May 2022 and the small fluctuations in water levels in the Site well between wet and dry periods, conducting the test in September of 2022 would not have yielded significantly different results than the test in May 2022.

FIGURE 1: MCCSD Average Groundwater Depth & Annual Precipitation

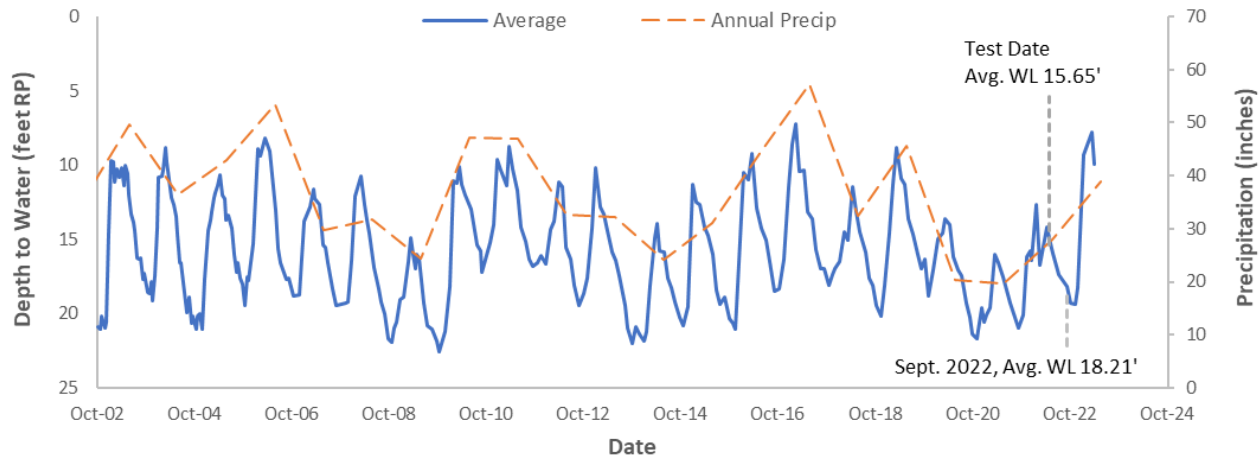
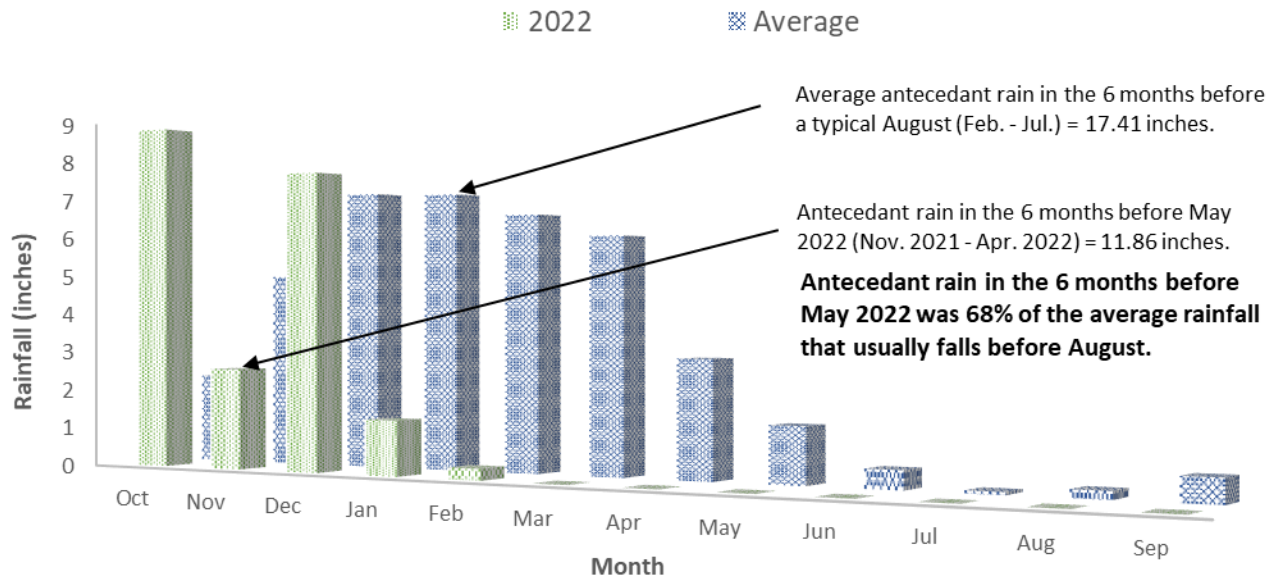


FIGURE 2. Rainfall Measured by MCCSD: Average Monthly & Actual 2022



DISCUSSION

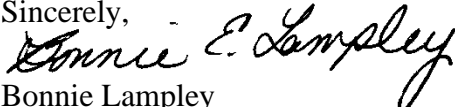
Mr. Hayes reported that you have received a comment stating that the May 2022 testing is invalid because it was not conducted in September (in the usual dry season) per Mendocino County *Guidelines* (Questa Engineering, July 1989, *County of Mendocino Coastal Groundwater Development Guidelines*). We understand that, as of May 2022, there was no requirement to conduct groundwater evaluations for cannabis cultivation per the *Guidelines*.

The *Guidelines* require groundwater testing between August 20 and October 31. The purpose of conducting testing in this time frame is to characterize aquifer and well performance when water levels are assumed to be at their lowest point in the year (towards the end of the dry season). Typically, May (spring time in general) is a time of higher groundwater levels (see **Figure 1**, page 2). **Figure 1** shows a graph of annual precipitation (dotted line) and the average groundwater level in Mendocino City Community Services District (MCCSD) wells. Groundwater levels, on average, were lower in May 2022 than in previous years, as was precipitation. Average MCCSD groundwater levels were approximately 3 feet lower in September 2022 than in May 2022.

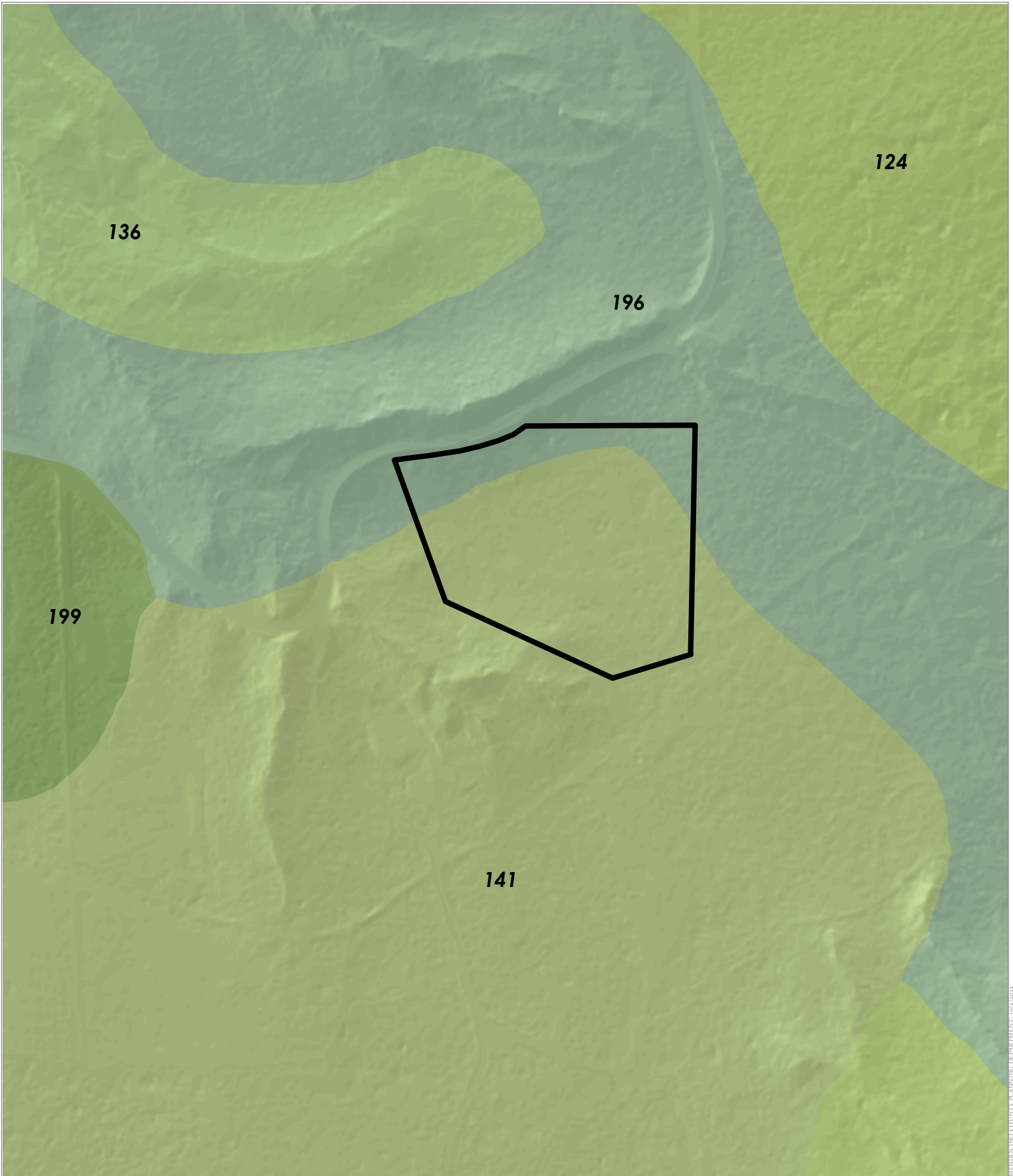
Figure 2 shows a graph of average and 2022 rainfall as measured by MCCSD. Typically, the amount of rain that precedes the 6 months before (is antecedent to) August is 17.41 inches. The total rain in the 6 months that preceded May 2022 was 11.86 inches. This is approximately 68% of the total that usually precedes an August testing period. That is, the period that preceded May 2022 was approximately 32% drier than the typical period preceding an August testing period. Thus, the testing in May 2022 was done in drier conditions than typically would be expected for testing in August or September.

If the testing had been conducted in August or September of 2022, groundwater level in the well might have been lower, but historic measurements suggest that it likely would not have been significantly lower. The initial test of the Site well, conducted in September 2005 (Pacific GeoScience, September 2005, *Hydrology Study, 10770 Calypso Lane, Mendocino, California, AP 119-090-35*) showed a static depth to water of 20.52 feet. In May 2022, the static depth to water was 20.43 feet, essentially the same as in September 2005. The year 2005 was towards the end of a wetter-than-normal period (rainfall in 2004 and 2005 totaled 79.35 inches). Rainfall in 2021 and 2022 totaled 47.44 inches. The similarity of the September 2005 and May 2022 water levels suggests that water level in this well does not fluctuate significantly between wet and dry periods. Thus, conducting the test in September of 2022 would not have yielded significantly different results than the test in May 2022.

Please feel free to contact me at 530-275-4800 or blampley@lwrnc.com if you have any questions regarding this report.

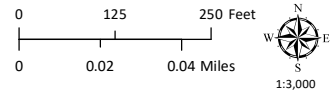
Sincerely,

Bonnie Lampley
President/Principal Hydrogeologist





MENDOCINO COUNTY PLANNING DEPARTMENT 10/7/2023

CASE: U 2022-0007
OWNER: SHEPPARD, Noah & Zoe
APN: 119-490-19
APLCT: William Hayes
AGENT: William Hayes
ADDRESS: 8261 Outlaw Springs Rd., Mendocino



WESTERN SOIL CLASSES

Revegetation of these areas is difficult because of the low fertility of the exposed materials.

The capability classification is VIII(4), nonirrigated.

196—Quinliven-Ferncreek complex, 2 to 15 percent slopes

This map unit is on marine terraces. The vegetation is mainly redwood, Douglas-fir, and bishop pine. Elevation ranges from 100 to 1,000 feet. The average annual precipitation is 40 to 65 inches, the average annual air temperature is about 53 degrees F, and the average frost-free period is 290 to 365 days.

This unit is about 60 percent Quinliven sandy loam and 25 percent Ferncreek sandy loam. The Quinliven and Ferncreek soils occur as areas so intricately intermingled that it was not practical to map them separately at the scale used.

Included with these soils in mapping are small areas of Caspar and Harecreek soils. Also included are small areas that have slopes of 15 to 30 percent. Included areas make up about 15 percent of the total acreage of the unit. The percentage varies from one area to another.

The Quinliven soil is very deep and is moderately well drained. It formed in marine sediments. Typically, the surface is covered with a mat of litter about 5 inches thick. The surface layer is light gray sandy loam about 4 inches thick. The next layer is white and very pale brown loam about 7 inches thick. The upper 7 inches of the subsoil is light yellowish brown loam. The next 14 inches is brownish yellow clay. Below this is 19 inches of brownish yellow clay that has red mottles. The lower 9 inches of the subsoil is yellowish red clay loam that has strong brown and light gray mottles. The substratum to a depth of 64 inches or more is yellowish red sandy loam that has strong brown mottles. In some areas the surface layer is loamy sand or loam.

Permeability is slow in the Quinliven soil. Available water capacity is high. The effective rooting depth is limited by saturation between the depths of 48 and 72 inches for brief periods following episodes of heavy rain from December through April. Surface runoff is slow or medium, and the hazard of water erosion is slight or moderate if the surface is left bare.

The Ferncreek soil is very deep and is somewhat poorly drained. It formed in marine sediments. Typically, the surface is covered with a mat of litter about 2 inches thick. The surface layer is gray and

white sandy loam about 7 inches thick. The upper 17 inches of the subsoil is very pale brown and light yellowish brown clay loam and clay. The next 9 inches is brownish yellow clay that has reddish yellow and red mottles. The lower 10 inches of the subsoil is brownish yellow sandy clay loam that has red and white mottles. The substratum to a depth of 61 inches or more is yellow sandy loam that has red and white mottles.

Permeability is slow in the Ferncreek soil. Available water capacity is high. The effective rooting depth is limited by saturation for brief or long periods following episodes of heavy rain from December through April. The saturated zone starts between the depths of 24 and 48 inches and extends to a depth of more than 60 inches. Surface runoff is slow or medium, and the hazard of water erosion is slight or moderate if the surface is left bare.

This unit is used for timber production, for homesite development, or as watershed.

Redwood, Douglas-fir, bishop pine, and tanoak are the main tree species on this unit. On the basis of a 100-year site curve, the mean site index for redwood is 124 on the Quinliven soil and 136 on the Ferncreek soil. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 135 on the Quinliven soil and 159 on the Ferncreek soil. The potential annual production from a fully stocked stand of redwood is 895 board feet per acre on the Quinliven soil and 1,060 board feet per acre on the Ferncreek soil. Areas that are subject to strong, persistent winds, which limit tree height, are less productive than other areas of this unit. Trees of limited extent include western hemlock, grand fir, and Mendocino cypress.

The main limitations affecting the harvesting of timber are the hazard of erosion and the seasonal wetness. The surface layer of these soils is subject to sheet and rill erosion when exposed. Disturbance of the protective layer of duff can be minimized by the careful use of wheeled and tracked equipment. Establishing plant cover on steep cut and fill slopes reduces the hazard of erosion. Another limitation is low bearing strength when the soils are saturated. Using wheeled and tracked equipment when the soils are moist produces ruts, compacts the surface, and can damage the roots of trees. Unsurfaced roads and skid trails are slippery and soft when wet. They may be impassable during rainy periods. Suitable surfacing of roads is needed for use during wet seasons. The design of roads should offset the limited ability of the soils to support a load. Roads are dusty when dry. Surface treatment may be

desirable during periods of heavy use. Rock for construction of roads generally is not available in areas of this unit.

Plant competition is a concern affecting the production of timber. When openings are made in the canopy, invading brushy plants that are not controlled can delay the establishment of seedlings. Because the surface layer of these soils has a low capacity to hold nutrients and water, the establishment of seedlings may be difficult. Reforestation can be accomplished by planting redwood and Douglas-fir seedlings. Natural reforestation by redwood sprouts and Douglas-fir seed trees provides variable stocking results. Both overstocked and understocked areas are common.

Among the common forest understory plants are tanoak, brackenfern, bedstraw, salal, California huckleberry, and swordfern.

The main limitations affecting homesite development are the slope, the low strength, the seasonally saturated soil conditions, and the restricted permeability. Excavations for roads and buildings increase the hazard of erosion. Revegetating disturbed areas around construction sites as soon as possible helps to control erosion. The design of access roads should control surface runoff and help to stabilize cut slopes. The design of buildings and roads should offset the limited ability of the soils to support a load. Surface drainage may be needed for roads and buildings. The seasonal wetness and the restricted permeability in the subsoil increase the possibility of failure of septic tank absorption fields. Alternative systems may be needed, such as those in which leach lines are placed in a mound above the soil surface.

The capability classification is IIIe-3(4), nonirrigated.

197—Riverwash

This unit is in active river channels. Slopes range from 0 to 2 percent. Vegetation, if it occurs, is mainly water-tolerant grasses and some willows. Elevation ranges from 50 to 1,500 feet.

Areas of this unit are inundated during periods of high water and are subject to deposition and removal of material. The unit consists of stratified layers of water-deposited sands, gravel, and cobbles. The thickness of these layers is extremely variable and is dependent upon water-velocity and location within the channel.

This unit is used as a source of sand and gravel. The capability classification is VIII(4), nonirrigated.

198—Seaside-Rock outcrop complex, 5 to 30 percent slopes

This map unit is on coastal hills and mountains. The vegetation is mainly manzanita and stunted cypress. Elevation ranges from 100 to 1,000 feet. The average annual precipitation is 45 to 55 inches, the average annual air temperature is about 55 degrees F, and the average frost-free period is 250 to 320 days.

This unit is about 40 percent Seaside loamy sand and 40 percent Rock outcrop. The Seaside soil and the Rock outcrop occur as areas so intricately intermingled that it was not practical to map them separately at the scale used.

Included in mapping are small areas of Havensneck soils. Also included are small areas that have slopes of 30 to 50 percent. Included areas make up about 20 percent of the total acreage of the unit. The percentage varies from one area to another.

The Seaside soil (fig. 5) is very shallow to bedrock and is somewhat excessively drained. It formed in material derived from sandstone. Typically, the surface is covered with a mat of leaves and twigs about 1/2 inch thick. The surface layer is very pale brown loamy sand about 1 inch thick. The subsoil is pale brown sandy loam about 6 inches thick. Hard, fractured sandstone is at a depth of about 7 inches. In some areas the surface layer is bouldery sandy loam.

Permeability is rapid in the Seaside soil. Available water capacity is very low. The effective rooting depth is limited by bedrock at a depth of 5 to 10 inches. Surface runoff is medium or rapid, and the hazard of water erosion is moderate if the surface is left bare.

Rock outcrop consists of hard sandstone. It is in areas that support little or no vegetation.

This unit is used for homesite development, for wildlife habitat, or as watershed.

The main limitations affecting homesite development are the slope and the very shallow depth to bedrock. The most favorable building sites are in the less sloping areas. Excavations for roads and buildings increase the hazard of erosion. Revegetating disturbed areas around construction sites as soon as possible helps to control erosion.

Plant cover helps to stabilize the dunes and prevent further movement.

The capability classification is VIII(4), nonirrigated.

139—Dystropepts, 30 to 75 percent slopes

This unit consists of soils on side slopes of marine terraces. These soils formed in material derived from sandstone or shale. The vegetation is mainly brush or grass and grand fir, Douglas-fir, and redwood. The redwood is in areas protected from salt spray. Elevation ranges from 10 to 400 feet. The average annual precipitation is 35 to 45 inches, the average annual air temperature is about 53 degrees F, and the average frost-free period is 250 to 330 days.

Dystropepts are shallow or moderately deep to bedrock and are well drained. A representative profile has a surface layer of dark grayish brown loam about 11 inches thick. The next layer is dark grayish brown very gravelly clay loam about 8 inches thick. Hard and soft, fractured shale is at a depth of about 19 inches.

Included in mapping are small areas of Abalobadiah and Vizcaino soils, areas of Rock outcrop, and areas of mass wasting along ocean bluffs. Also included are small areas that have slopes of 15 to 30 percent or 75 to 99 percent. Included areas make up about 25 percent of the total acreage of the unit. The percentage varies from one area to another.

Permeability and available water capacity are extremely variable in the Dystropepts. The effective rooting depth is limited by bedrock at a depth of 10 to 40 inches. Surface runoff is rapid or very rapid, and the hazard of water erosion is severe or very severe.

This unit is used as watershed or wildlife habitat.

The capability classification is VIIe(4), nonirrigated.

140—Feliz loam, 0 to 5 percent slopes

This very deep, well drained soil is on river terraces. It formed in alluvium derived from mixed rock sources. The vegetation in areas that are not cultivated is mainly annual grasses and forbs. Elevation ranges from 160 to 1,750 feet. The average annual precipitation is 40 to 60 inches, the average annual air temperature is about 55 degrees F, and the average frost-free period is 175 to 250 days.

Typically, the surface layer is brown loam about 27 inches thick. The upper 16 inches of the underlying material is pale brown loam. Below this to a depth of

about 60 inches is dark yellowish brown clay loam. In some areas the surface texture is sandy loam or loamy sand.

Included with this soil in mapping are small areas of Talmage soils and areas of Riverwash. Also included are small areas that have slopes of 5 to 9 percent. Included areas make up about 20 percent of the total acreage of the unit. The percentage varies from one area to another.

Permeability is moderate in the Feliz soil. Available water capacity is very high. The effective rooting depth is 60 inches or more. Surface runoff is slow, and the hazard of water erosion is slight if the surface is left bare. Some areas are subject to very brief periods of rare flooding from December through April.

This unit is used mainly for production of wine grapes and apples. A few areas are used for vegetable production, hay production, or pasture.

Few limitations affect the use of this soil for the production of wine grapes and apples. Managing cover crops by mowing instead of tillage helps to control erosion and reduces energy consumption.

Irrigation is needed to establish grapes. Sprinkler and trickle irrigation methods are suitable for vineyards. These methods permit the even, controlled application of water, minimize runoff, and reduce the hazard of erosion. Wine grape production is estimated at 4 to 5 tons per acre. Apple production is estimated at 15 to 20 tons per acre.

The capability classification is IIIe-1(14), nonirrigated, and IIe-1(14), irrigated.

141—Ferncreek sandy loam, 2 to 9 percent slopes

This very deep, somewhat poorly drained soil is on marine terraces. It formed in marine sediments. The vegetation is mainly redwood, bishop pine, and Douglas-fir. Elevation ranges from 100 to 800 feet. The average annual precipitation is 40 to 65 inches, the average annual air temperature is about 53 degrees F, and the average frost-free period is 290 to 365 days.

Typically, the surface is covered with a mat of litter 2 inches thick. The surface layer is light gray, gray, and white sandy loam about 7 inches thick. The upper 17 inches of the subsoil is very pale brown and light yellowish brown clay loam and clay. The next 9 inches is brownish yellow clay that has reddish yellow and red mottles. Below this, from a depth of 33 to 43 inches, is brownish yellow sandy clay loam that has red and white mottles. The lower part of the subsoil to a depth of 61 inches or more is yellow sandy loam

that has red and white mottles. In some areas the surface layer is loam.

Included with this soil in mapping are small areas of Caspar and Quinliven soils. Also included are small areas that have slopes of 9 to 15 percent. Included areas make up about 20 percent of the total acreage of the unit. The percentage varies from one area to another.

Permeability is slow in the Ferncreek soil. Available water capacity is high. The effective rooting depth is limited by saturation for brief or long periods following episodes of heavy rain from December through April. The saturated zone starts between the depths of 24 and 48 inches and extends to a depth of more than 60 inches. Surface runoff is slow or medium, and the hazard of water erosion is slight or moderate if the surface is left bare.

This unit is used for timber production, homesite development, or watershed.

Redwood, Douglas-fir, bishop pine, and tanoak are the main tree species on this unit. On the basis of a 100-year site curve, the mean site index is 136 for redwood and 159 for Douglas-fir. The potential annual production from a fully stocked stand of redwood is 1,060 board feet per acre. Areas that are subject to strong, persistent winds, which limit tree height, are less productive than other areas of the unit. Trees of limited extent include western hemlock, grand fir, and Mendocino cypress.

The main limitation affecting the harvesting of timber is the seasonal wetness. Disturbance of the protective layer of duff can be minimized by the careful use of wheeled and tracked equipment. Establishing plant cover on cut and fill slopes reduces the hazard of erosion. Another limitation is low bearing strength when the soil is saturated. Using wheeled and tracked equipment when the soil is wet produces ruts, compacts the surface, and can damage the roots of trees. Unsurfaced roads and skid trails are slippery and soft when wet. They may be impassable during rainy periods. Suitable surfacing of roads is needed for use during wet seasons. The design of roads should offset the limited ability of the soil to support a load. Roads are dusty when dry. Surface treatment may be desirable during periods of heavy use. Rock for construction of roads generally is not available in areas of this unit.

Plant competition is a concern affecting the production of timber. When openings are made in the canopy, invading brushy plants that are not controlled can delay the establishment of seedlings. The soil has a low capacity to hold nutrients and water. As a result, the establishment of seedlings may be difficult. Reforestation can be accomplished by

planting redwood and Douglas-fir seedlings. Natural reforestation by redwood sprouts and Douglas-fir seed trees provides variable stocking results. Both overstocked and understocked areas are common.

Among the common forest understory plants are tanoak, brackenfern, bedstraw, salal, California huckleberry, and swordfern.

The main limitations affecting homesite development are low strength, the seasonally saturated soil conditions, and the restricted permeability in the subsoil. The design of buildings and roads should offset the limited ability of the soil to support a load. The seasonally saturated soil conditions and the restricted permeability increase the possibility of failure of septic tank absorption fields. Alternative systems may be needed, such as those in which leach lines are placed in a mound above the soil surface.

The capability classification is IIIe-2(4), nonirrigated.

142—Fishrock-Iversen complex, 2 to 15 percent slopes

This map unit is on ridgetops and the upper side slopes of coastal hills and mountains. The vegetation is mainly manzanita and bishop pine on the Fishrock soil and Douglas-fir and redwood on the Iversen soil. Elevation ranges from 600 to 1,300 feet. The average annual precipitation is 45 to 55 inches, the average annual air temperature is about 55 degrees F, and the average frost-free period is 250 to 320 days.

This unit is about 60 percent Fishrock loam and 20 percent Iversen loam. The Fishrock and Iversen soils occur as areas so intricately intermingled that it was not practical to map them separately at the scale used.

Included with these soils in mapping are small areas of Seaside soils, soils that are more than 40 inches deep to bedrock, and small areas that have slopes of 15 to 30 percent. Included areas make up about 20 percent of the total acreage of the unit. The percentage varies from one area to another.

The Fishrock soil is shallow to bedrock and is well drained. It formed in material derived from sandstone or mudstone. Typically, the surface is covered with a mat of leaves and twigs about 1 inch thick. The surface layer is brown loam about 2 inches thick. The upper 5 inches of the subsoil is reddish yellow clay loam. The lower 5 inches is light yellowish brown clay. Hard, fractured sandstone is at a depth of about 12 inches.

Permeability is slow in the Fishrock soil. Available